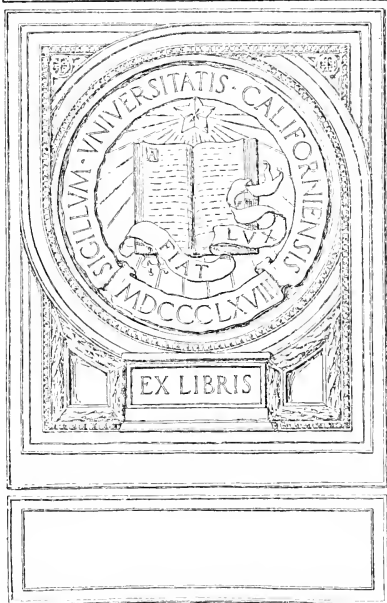


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GIFT OF
Professor John S. Tatlock



NEWLY REVISED EDITION OF

RICHTER'S MANUAL OF HARMONY.

A

PRACTICAL GUIDE TO ITS STUDY.

PREPARED ESPECIALLY FOR THE CONSERVATORY
OF MUSIC AT LEIPSIK

BY

ERNST FRIEDRICH RICHTER.

REVISED AND EDITED FROM THE LATEST EDITION

BY

OSCAR COON,

WITH EXPLANATORY NOTES AND ADDITIONAL EXERCISES.

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EDITOR'S PREFACE.

That Richter's Manual of Harmony is one of the best text-books ever written on the subject, no one will now deny. In 1843, Richter became professor of harmony and counterpoint in the Conservatory of Leipsic, and this work is the result of his experience as a teacher in that institution. The *twelfth* edition was published as early as 1876, and the work has been translated into Dutch, Swedish, Italian, Russian, Polish and English. The enormous success of the work becomes apparent when we reflect that it has passed through its *twentieth* German edition.

In preparing this edition of the manual, the editor has endeavored to make the language, which in other editions is often somewhat obscure, more explicit and to the point. Pupils frequently complain that they cannot catch the meaning of many of the explanations. The reason is, that they are not sufficiently advanced in musical knowledge to enable them to comprehend the meaning of the prolix language used. Students, and *especially those who have not the advantage of a teacher*, require clear and concise directions. Having used this manual many years as a text-book in teaching harmony, the editor has learned by experience where the difficulties lie, and has done what he could to remedy them. Many additional exercises have been appended to the work and also some notes of explanation.

THE EDITOR.

FROM THE PREFACE TO THE FIRST EDITION.

The reason for publishing this manual of harmony is given in the title. During the course of studies in the theory of music, it was desirable to furnish the pupils with some aid in explaining and illustrating the principles brought before them. The qualities of such a work the author believes to be these :

It must contain the essential fundamental principles of musical theory in the most concise and complete form possible; that these principles must be accompanied by practical directions for their application in order to qualify for future attempts in composition.

The book contains no scientific theoretical treatise on harmony, so to speak, but (as with any system of harmony it rests upon a firm basis) is devoted only to the *practical* object, which, with the scanty means now accessible, would be difficult to obtain in an abstractly scientific manner.

There has, indeed, always been a disposition to inquire after mathematical precision in musical rules, and especially among the young, opposed to authority, who wish to have everything so clear that doubt would be impossible, yet shrink from learning the beauties of this beautiful art by means of the anatomical knife ; and, it is not to be denied that in this regard there is a want in musical literature which has not yet been fully supplied. All attempts of this kind have so far failed to produce a really tenable scientifically musical system, according to which all phenomena in the world of music can be shown as the necessary result of *one* fundamental principle. What philosophers, mathematicians and physicists have achieved in this regard is worthy of attention, but is on the one hand, too much divided to form a complete whole, and on the other, too abstract, serving music less than other purposes ; and notwithstanding the knowledge of musical things shown, has but little reference to that which is really musical, which is of the most importance to the musician after all. What is laid down in musical text-books as a scientific basis has thus far not been justified, partly, because as the result of learned individual investigation, it was impossible to form a complete system with indisputable conclusions, and partly, because as a fanciful structure, it was entirely

without scientific support. (‘The Nature of Harmony and Metre,’ by M. Hauptmann, might supply a palpable want.)

Still, properly considered, this deficiency is felt only by the riper and more cultivated musician who likes to busy himself with theory; not, however, so detrimental to the *advancing student* that his progress must suffer in consequence of it; and the above mentioned skepticism might be regarded in a certain way like the childish desire to learn the cause of everything by questions which can seldom be answered clearly enough for his stage of learning.

At first, the student of music has to devote his whole attention to his technical studies, as it will cost him time and trouble enough to reach the standpoint from which he may more easily advance to the position of an artist. Here the question is not *why*, but rather *how*, to learn from experience and the best models the necessity of certain principles, not to calculate it. Afterwards, should education, inclination and calling require, it will be time enough to reason out the *why*, and the knowledge derived from experience will be an aid not to be despised in discovering the natural laws of music. With this practical aim in view, the author has undertaken to give, in a clear and simple manner, the representation of harmony, and the results of observation and experience; and as the book was intended for *study*, to let the principles which it contained work through themselves, without wishing to attract a large circle of *readers* through a learned dress or a winning form. It contains the complete doctrine of harmony, with hints for a rational method of working exercises for fixing the same, and for the skilful use of all harmonic fundamental principles. These exercises extend to the beginning of contrapuntal studies. The doctrine of counterpoint itself will follow in a later volume on the same plan.

In conclusion, still a word to the student of art, an earnest one, but well meant. Our object is to reach a distant goal; it is to produce works of art. For this, vigorous, untiring industry is necessary to comprehend the fundamental principles of music and to form that which is won and understood into a living structure. They will be bitterly disappointed who think to pluck the blossoms without learning thoroughly to know and prove the technical requirements; who cling to the notion that the charm of beauty which overspreads a work of art would be lost through the analysis of the material, or that the primary forms of the latter could never be developed into that requisite beauty. Talent alone, without thorough knowledge, has never

yet reached that point where artistic efforts are really successful. Practice without knowledge is not artistic skill, but only the working of the instinct, which will make the want of proper education always apparent. The spiritual thought cannot dispense with the form, and this must be recognized and learned. Even if this comes with the thought itself, still, it is of more importance in music than anything else, to analyze the thought logically, to remodel it into new forms, and transform it in the most manifold way. The knowledge of these things and the skill in their use must be acquired by the talented also, and this can only be done by taking pains to recognize the musical laws, and by seeking to imitate and further develop what others have long since discovered. Earnest persevering work, and above all, a rational method of developing to maturity, and for the creation of, living works of art, will, in connection with musical ability, surely lead to the goal.

E. F. RICHTER.

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INTRODUCTION.

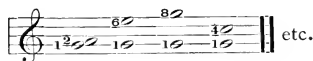
Of the elementary knowledge of music, an acquaintance with which must be assumed before beginning the study of harmony, that portion which stands in the nearest relation to it, *The Theory of Intervals*, will be briefly discussed.

Intervals.

Interval is the relation in which one tone stands to another in respect to distance. The distance between any two tones is reckoned by the number of degrees of the diatonic scale which it contains, and the interval formed by those tones is named accordingly.

REMARK. — By diatonic degrees is understood the progression of tones formed by any major or minor scale.

Thus, if G be the lower note of an interval and considered as the first degree of the scale, A will be the second degree, and the interval G—A will be that of a second. E will be the sixth degree, and the interval G—E will therefore be a sixth.



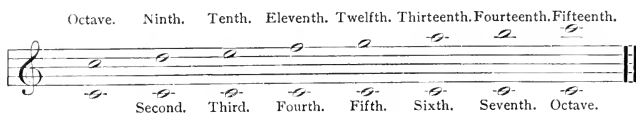
Counting always from the lower note, or first degree, the major scale gives the following result:



The intervals are generally only counted as far as the octave, the

same order being repeated for those intervals which lie beyond that compass; thus, the ninth degree is considered as the second, the tenth as the third, and so on.

There are, however, reasons which will be perceived hereafter for giving names also to those intervals which are greater than the octave. All such will therefore have two names, as follows :



When distances between two tones are greater, they are simply brought down to the lower octave.

More Exact Designation of Intervals.

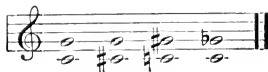
It will be seen that the above series of intervals is composed entirely of the notes of the diatonic major scale of C, and has always the *first* degree of that scale for the lower note of each interval. It is, however, easy to understand that any other degree of the scale can serve as the lower note of an interval, in which case the *numbers* of the two tones forming the interval will be changed, inasmuch as the lower note of an interval is always considered as the *first degree*, and other slight differences will occur.

In order to obtain a clear insight into these differences, the following principles must be carefully noted :

The above series of intervals, in which the lower note is the first degree of a major scale, while all the other degrees of the scale are employed as upper notes, serves as the foundation for the determination of all intervals. These intervals are called **major**, some **perfect**.

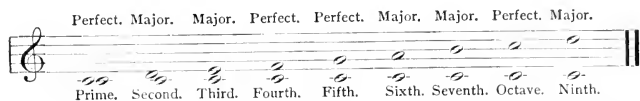
Any chromatic alteration of either of the two notes which form an interval, alters neither the number of the degree, nor the name of the interval, but makes necessary a more exact definition.

If, for example, a sharp or flat be added to either of the notes forming the fifth, C—G, it remains a *fifth* still, but a *different fifth* from what it originally was.

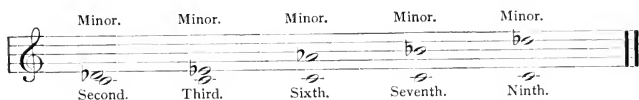


In order to distinguish between the various chromatic alterations of intervals, the following terms are used :

1. *Primes* (unisons), *fourths*, *fifths* and *octaves*, which are formed of the notes of the diatonic major scale, and have the first degree of the scale for the lower tone, are called **perfect**. All the other intervals of the same scale are called **major**.



2. If the upper tone of a *major* interval be *chromatically lowered* a half-step, a **minor** interval is formed.



3. If the upper tone of the *prime*, *second*, *fourth*, *fifth*, and *sixth* be *chromatically raised* a half-step, **augmented** intervals are formed.



4. By raising the *lower* tone of the *minor third*, *perfect fourth*, *perfect fifth*, *minor seventh*, and *perfect octave*, a *chromatic half-step*, **diminished** intervals are formed.



REMARK.—Diminished primes, seconds, sixths and ninths are harmonically inconceivable, but may exist in melodic relations—in reference to progressing intervals, but not to those which sound together.

*Augmented thirds, sevenths and ninths do not occur in harmonic relations. Augmented octaves are to be regarded as augmented primes.

Remark on the formation of Intervals.

The reason why, in the formation of the diminished intervals, the lower tone was raised, notwithstanding that a similar interval would result if the upper tone were lowered, lies in the peculiar relations of all intervals in respect to their inversion, which will be spoken of hereafter.

General View and Classification of Intervals most in use.

The diagram illustrates the formation of intervals on a treble clef staff. Each interval is shown with two notes and a bracket above them. The intervals are classified as follows:

- Primes:** Perfect (C4 to C5), Augmented (C4 to C#5).
- Seconds:** Major (C4 to D5), Minor (C4 to B4), Augmented (C4 to D#5).
- Thirds:** Major (C4 to E5), Minor (C4 to D#5), Diminished (C4 to E#5).
- Fourths:** Perfect (C4 to F5), Augmented (C4 to F#5), Diminished (C4 to Gb5).
- Fifths:** Perfect (C4 to G5), Augmented (C4 to G#5), Diminished (C4 to Ab5).
- Sixths:** Major (C4 to A5), Minor (C4 to Ab5), Augmented (C4 to A#5).
- Sevenths:** Major (C4 to B5), Minor (C4 to Bb5), Diminished (C4 to B#5).
- Octaves:** Perfect (C4 to C6), Diminished (C4 to C#6).
- Ninths:** Major (C4 to D6), Minor (C4 to Db6).

Division of Intervals into Consonances and Dissonances.

By the expression *consonant* and *dissonant* intervals, we do not understand such as do or do not sound well, as the terms might seem to imply, but by the former is meant those which produce a final and complete effect on the ear by themselves, and by the latter those which require to be followed by another harmony, without which their effect would be unsatisfactory and incomplete.

Consonances are all those intervals called *perfect*, and also the *major* and *minor thirds* and *sixths*.

The first are called *complete*, the last *incomplete* consonances.

The **dissonances** comprise the *major* and *minor seconds*, *major* and *minor sevenths*, and all the *augmented* and *diminished* intervals.

The following table gives a general view :

I. CONSONANCES.

a. COMPLETE.

The perfect *prime*, perfect *fourth*, perfect *fifth*, perfect *octave*.



N. B. The peculiar relations of the fourth will be explained later, when treating of harmony.

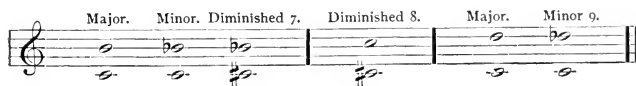
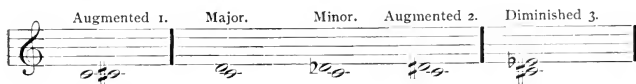
b. INCOMPLETE.

The major and minor *third*, the major and minor *sixth*.




II. DISSONANCES.

The augmented *prime*, the major, minor and augmented *second*, the diminished *third*, the augmented and diminished *fourth*, the augmented and diminished *fifth*, the augmented *sixth*, the major, minor and diminished *seventh*, the diminished *octave*, and the major and minor *ninth*.

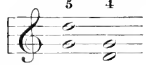


Inversion of Intervals.

As has already been shown, the interval is usually counted upward from the lower tone. Should there be reasons, however, for reversing this principle and counting downward from the upper tone, they are called intervals *below*.

Thus,  D is the fifth above G. G would also be the fifth below D. It will be seen that the interval has undergone no change by this proceeding.

It is, however, otherwise, when the upper tone of an interval is placed an octave lower, and consequently *below* the original lower tone. If, for example, the upper tone D, of the fifth G—D, be transposed an octave lower, the interval will change from a fifth to a

fourth; thus, . This transposition of a tone is termed an **inversion** of the interval.

By means of inversion, the intervals of the diatonic major scale will be altered as follows:

INTERVALS ABOVE.



INTERVALS BELOW.

The following series of numbers result:

1	2	3	4	5	6	7	8
8	7	6	5	4	3	2	1

that is, through inversion the *prime* becomes an *octave*, the *second* a *seventh*, etc.

Taking the inverted major scale as a basis, we find—

1. All **perfect** intervals remain **perfect** when inverted an octave.
2. All **major** intervals become **minor**, all **minor**, **major**, the **augmented**, **diminished**, and the **diminished**, **augmented**.

A view of all the inversions is shown in the following table:

ORIGINAL INTERVALS.

Primes. Seconds.

Perfect. Augmented. Major. Minor. Augmented.

INVERSION.

Octaves. Sevenths.

Perfect. Diminished. Minor. Major. Diminished.

Thirds. Fourths.

Major. Minor. Diminished. Perfect. Augmented. Diminished.

Sixths. Fifths.

Minor. Major. Augmented. Perfect. Diminished. Augmented.

Fifths. Sixths.

Perfect. Augmented. Diminished. Major. Minor. Augmented.

Fourth. Thirds.

Perfect. Diminished. Augmented. Minor. Major. Diminished.

Sevenths. Octaves.

Major. Minor. Diminished. Perfect. Diminished.

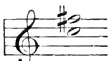
Seconds. Primes.

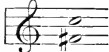
Minor. Major. Augmented. Perfect. Augmented.

An accurate knowledge of the inversions of intervals is not only important for the study of double counterpoint, but also because it renders the comprehension of the simple harmonic structure much easier, for which reasons their study is urgently to be recommended.

A few remarks may follow here :

The reason why, in the first table of intervals (p. 16) all *diminished* intervals were formed by raising the lower tone a chromatic half-step, and not by lowering the upper, is easily to be seen from the above table of inversions. Since *diminished* intervals result from the *augmented* by the inversion in the octave, this formation comes of itself.

For example, the augmented fourth  must, through inver-

sion produce the following diminished fifth: . Also, the *perfect* fourth belongs originally to the consonances, since it is changed to the *perfect* fifth by inversion, just as the *perfect* fifth can produce only the *perfect* fourth. A dissonance can never result from the inversion in the octave of a consonance. Mention is made here of this because, in special cases to be noticed later, the fourth has to be treated like some of the dissonances, which in former times led some theorists to treat it only as a dissonance.

Likewise it will be clear that the augmented octave, and also the ninth, cannot be inverted (in the octave), as they can never become *intervals below*.

Other kinds of inversions, as in the tenth and twelfth, which produce entirely different results, may be passed over here, as they have no bearing on our immediate studies.

Since a complete and thorough knowledge of all the intervals is indispensable for the study of harmony, written exercises, as well as oral solution of given intervals, will greatly facilitate their comprehension, and should be practiced diligently.

HARMONY.

Combinations of tones, sounding at the same time, and composed of different intervals according to certain fundamental principles, are called in general, *harmonies*, *chords*.

The doctrine of harmony acquaints us with the different kinds of chords and their natural treatment. This consists in the *correct* and *natural connection* of the chords with one another; that is, in the transition, resolution, or blending of one chord in and with the following.

PART I.

THE FUNDAMENTAL HARMONIES AND THE CHORDS DERIVED FROM THEM.

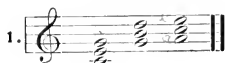
Among the various chords which may serve as the harmonic basis of a composition, it is easy to distinguish between those which are *independent*, without a definite connection with others, and those which require a connection with preceding and succeeding chords to render them intelligible — therefore *not independent*.

To the first class belong most of the *triads*, to the second the *chords of the seventh*. These two varieties of chords form the *fundamental harmonies* from which all others are derived.

CHAPTER I.

THE TRIADS OF THE MAJOR SCALE.

A **triad** is formed by a combination of *three* different tones, hence the name *triad*. The lowest of these tones is called the *fundamental* tone, to which are added its *third* and *fifth*, for example :



These triads, formed on C, G, and *a*, show a difference in their intervals. While the triads of C and G are formed of *major thirds* and *perfect fifths*, that of *a* has a *minor third* and *perfect fifth*.*

A triad with a *major third* and *perfect fifth* is termed a **major triad**; a triad with a *minor third* and *perfect fifth*, a **minor triad**.

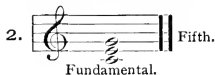
REMARK. — Triads of other kinds cannot be explained until later.

As the diatonic scale makes up the essence of a key, and forms the groundwork of the melodic successions, so also the triads, which are built upon the different degrees of the scale, will form the essential part of the *harmonic* substance.

Natural Connection of the Triads of a Key.

The triad which is based upon the *first degree of a key* is the most important, since it determines the key. There are, however, others which are nearly related and next in importance to it, which serve to explain its position.

In the natural position of the triad, third above third, the *lowest* tone is the fundamental, the *fifth* the highest tone.



The addition of any new interval would either alter the chord or double some of its tones already present.

The triad which is nearest related to this (the triad on the first degree) must, as an independent chord, lie outside of it, yet rest upon one of its tones. This tone (connecting link) can only be found in the extreme boundaries of the chord, namely C and G. Therefore, G, which is the fifth, will form the *fundamental* of the nearest related triad; while C will serve as *fifth* of the other, the fundamental of which will be F.

The relationship of these three chords is clearly shown in the following example :



It will be observed that these three nearly related triads comprise all the tones of the scale. They form the foundation of the key and

*Capital letters denote major, small letters minor, chords.

are, and must be, more frequently employed in practical composition than any others, if the key is to be clearly and distinctly presented.

On account of their importance, they have received special names. The chord standing on the first degree of the scale is called the **tonic triad**; that on the fifth degree, the **dominant triad**; that on the fourth degree, the **sub-dominant triad**.

If we place these three chords in their order in the scale, without showing their inner connection, they will stand thus :



and they are also seen to be all *major triads*.

Application of the Foregoing Harmonies.

In the application of these three, as well as other chords, we will employ the four-voiced phrase.

REMARK. — Theoretical chord connection can, indeed, be illustrated in many ways by the three-voiced phrase. It would, however, keep us too long from our practical object, and may be left for special treatment. The four-voiced movement will always maintain its importance as the basis of all kinds of composition.

We regard each harmony (chord), *not* as a mere mass, as compositions for the pianoforte often exhibit them, but as a combination of tones to be divided into *four different voices*.

The upper part is called the **soprano**, the lowest **bass**. These two are called the *extreme* or *outer voices*. The voice next under the soprano is called the **alto**, the one next above the bass, **tenor**. The alto and tenor are termed *middle voices*.

These voices arranged in the manner of a score will be as follows, and the triad appears thus :

5.

5. Musical notation showing a four-voiced phrase (Soprano, Alto, Tenor, Bass) for a triad, illustrating the arrangement of voices in a score.

For the three upper voices, or parts, different clefs are used, which are more suitable to their compass than the violin (or G clef).

These will be treated of hereafter.

For the present we will not employ a separate staff for each voice, but for greater ease in reading the examples, we will make use of two, such as are used for piano music.

The distribution of voices in No. 5, may be shown thus :

SOPRANO.
ALTO.
TENOR.

6.

BASS.

In writing in four parts, attention must be paid to two things—first, to the progression of each part for itself *alone*, and then to the relationship of each part to the three others, so that both shall be *pure* and *well-constructed*.

The fulfilment of these two conditions results in what is termed **pure voice leading**.

This purity of harmony and progression is attained by seeking out and practicing that which is *natural* and *lawful* in the connection of harmonies.

Thus arises the so-called pure part-writing, or strict style, which imposes rules and laws which belong to the nature of music itself. The observance of these laws will secure the surest foundation for a free use of the materials for composition. Exercises in pure part-writing sharpens the judgment, the sense of what is true and correct is formed, and the taste cultivated and refined.

REMARK.—In so far as every composition should be the result of a proper use of all available means and the purity (natural expression) obtained thereby, the term pure harmonic structure, or pure part-writing, would, in a general sense require no further explanation, as being a matter of course. In a narrower sense, however, by pure harmonic structure, something more is understood which might be better and more exactly indicated by the expression of similar meaning, *strict composition*, *strict style*, to distinguish it from *free style*, whereas, properly speaking, nothing as opposed to *pure* structure, as for instance, *impure* structure, is to be assumed; since, however often it may occur, is always to be designated as false, while the *free* structure could be based upon what is legitimate in the *pure* style.

As was said before, by pure harmonic structure, in the narrower sense, is understood such a one as in the natural development of tone relations, allows the fewest

deviations from what is legitimate, and only such as do not trench upon that which is essential or fundamental.

If the idea of pure harmonic structure is thus determined in a general way, still its limits are not yet drawn; and it is just this point which creates all the more difficulties for the beginner, since the limits are so variously fixed by theorists themselves. This difficulty has caused many of them, especially some of the more modern ones, to say nothing of pure construction, or strict style, but to begin at once with composition, and teach the laws of harmony incidentally. Whether this indulgence with youthful impatience which does not like to busy itself with the abstract — this tendency towards premature living creation before the organic has developed into a creative capability, can produce anything really mature, will not be further investigated here.

Those who follow the views of this book and conform their studies to them, as well as those who have to go through a strict school, may be assured that their freedom for future creation will by no means be lost by means of that which is forbidden them, but will develop itself more fully and with more vital power upon a basis conformable to nature. Real mastery has ever learned to make itself felt most genially within certain limits, whereas the most fantastic ideas often furnish proof of a weak and morbid mind. On the other hand the student will not be justified, where *rules* are concerned, in making use of exceptions to those rules which, perhaps, may be found in the works of the best masters, or in general, in wishing to produce composition, when the proper thing is to work exercises theoretically well.

The employment of the three chords already found, when applied in four-part harmony, will afford opportunity for remarks and observations, and necessitate certain rules and fundamental principles.

As the triad is composed of only *three* tones, one of its intervals must be doubled when four parts (voices) are to be used.

Any interval of the triad may be doubled, but the fundamental is the one best adapted for this purpose, more seldom the fifth and third, while there are cases in which the third is not to be doubled at all.

To accomplish the connection of two triads, one with another, the following rule must be observed:

When any one tone occurs in two chords which are to be connected, it is to be retained *in the same voice*, e. g.



In the example *a*, C is a tone found in both chords. The soprano, which had the C in the first chord, retains it also as the fifth of the next chord. Likewise in example *b*, the alto makes the connection by taking G in both chords.

The remaining voices proceed to those tones of the following chord which lie *nearest to them*, as in example *a*, the alto from G to A, and the tenor from E to F, etc.

When two consecutive chords are composed of entirely different notes, the voices are led in such a manner as to avoid what are termed **parallel fifths and octaves**.

In order to explain this objectionable progression more fully, we must first consider the relation of one part to another as regards the movement of the voices.

The Movement of Voices in respect to each other.

One voice can progress with another in

Parallel [direct] motion (*motus rectus*),
 Contrary motion, (*motus contrarius*) and
 Oblique motion, (*motus obliquus*).

Parallel motion occurs if two voices rise or fall at the same time, *e. g.*



They move in **contrary motion** if the one rises and the other falls, *e. g.*

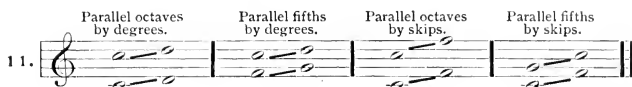


Oblique motion occurs when one voice remains on the same tone while the other ascends or descends, *e. g.*



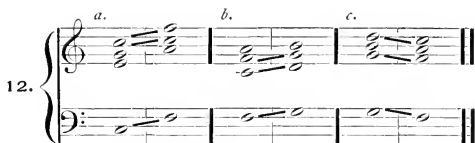
A mixture of these three kinds of motion occur in chord connections. Thus, in No. 7, at *b*, the soprano and tenor move in parallel motion, while contrary motion is found between soprano, tenor and bass, and oblique motion between the alto and all the other voices.

The above-mentioned *faulty* progression in *parallel octaves* and *fifths*, can only occur in *parallel* motion, if for example, two voices move by degrees or skips *from* a perfect fifth or octave, *to another* perfect fifth or octave, thus :



These movements are regarded as *faulty for all voices*.

The following progressions of harmony contain both faults :



The faulty parallels are indicated by the oblique lines.

In example *a*, there are parallel octaves, by skips, between soprano and bass, and parallel fifths between alto and bass. In example *b*, parallel octaves, by degrees, are found between alto and bass, and fifths between tenor and bass, and in example *c*, octaves, by degrees, between tenor and bass, and fifths between soprano and tenor, and soprano and bass.

To avoid these and similar faulty movements of the voices, it is necessary that the voices, between which the fault lies, should be led in contrary or oblique motion with each other; that is, the voice which forms an octave or fifth with another, must move in contrary motion with it, or in case the next chord contains the *same tone*, must remain *stationary*, thus producing oblique motion. The remaining voices then move to the nearest intervals of the new harmony.

Thus, in example 12, *a*, one voice must remain on C, while the others pass upward, resulting in oblique motion between the alto and all the other parts. At *b* and *c*, contrary motion to the bass must

be used in all the parts—at *b*, toward the bass, at *c*, from it, for example :



REMARK. — The reason for the *prohibition of octaves* (also the unison) can be easily found in the necessary independence of the parts. The reason for the prohibition of *fifth progressions* is more difficult to discover, however much we may feel the necessity of it; and from the earliest times, much pains have been taken to express it clearly and definitely. Let the following view on this point be examined. If each chord-formation presents for itself a distinct *whole*, which, however else it may be formed, yet, in respect to its fundamental and fifth mainly, unites itself as it were into a *circle* (the seventh, as an addition, not being considered here), and if connections of harmony can only be produced by one chord, so to speak, going over and passing, or resolving into another, then it is plain that two chords having their extremes fifth following fifth, cannot resolve themselves into each other, but, when placed side by side, will appear without any relation to each other.

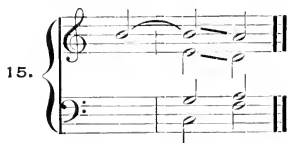
This can be seen by comparing the following :



The sevenths do not form essentially new chords, neither do they lie beyond the circle of the primary chord: they only serve to indicate more distinctly the relationship of two chords, and make the connections more intimate and firm.

Now, wherever the *perfect fifth* appears, it will carry in itself the character of *boundary*; and whether the remaining parts of the chord (the contents as it were of the fifth) or an added interval like the seventh, lie above or below it, the disagreeable effect of *two perfect fifths* in succession will always be found to consist in the lack of connection.

While speaking here of the fifths of triads only, it may still be observed, that in the case of *perfect fifths* which arise from added sevenths, the requirement of their preparation, partly of itself, prevents parallel fifths; but in the case of the progression of such a seventh which forms a perfect fifth with another voice, to *another perfect fifth*, the unpleasantness and lack of connection will be preceptible in the *second fifth* only which enters without connection, *e. g.*



Concerning the diminished fifth, however, which in the dominant seventh chord can enter free (unprepared) in certain cases, its entrance unprepared, even in the case of parallels, perfectly justifies the views expressed above, for whenever it *follows* the perfect fifth, its connecting character is felt, but when it *precedes* it, the latter, taking no account of the laws of progression, steps at once *outside* of the connecting circle of both harmonies. Compare the following:

16. a. b. c.

If passages like the following are frequently found in compositions of the stricter style:

17.

it may be assumed that the doubling of the diminished fifth (the F) requires a double progression of the same, and that the succession of fifths are justified because they lie in the middle voices, but that the following progressions could not be called pure,

18.

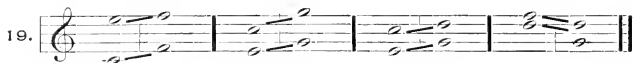
partly because they are too prominent in the upper voice; partly because the above condition of a necessary double progression is wanting, although passages like No. 16, c, are plentiful enough.

Here it also becomes clear why such parallel fifths as arise through passing notes, in many cases do not sound as disagreeable as those mentioned above, and for this reason many theorists regard them as faultless. This, however, cannot be admitted altogether, since many of them are based upon other false progressions (for example, upon covered fifths), and it is not to be denied, that with a very open position and a sufficiently long duration, their unpleasant effect is noticable.

It is not the place here to treat further of these relations, and there would be much to say on many points, as for example, the progression of the fifth in the augmented chord of the sixth and fifth, but which would lead us too far. Individual cases will lead us back to this point in connection with our practical exercises. If the meaning of the foregoing remarks be too obscure for the beginner, with more advanced knowledge and practice in the entire harmonic system, it will soon be comprehended.

The faulty progression, thus far mentioned, is called **open fifth and octave progression**.

They are called **covered** if, in parallel motion of two voices, the *second* interval forms a fifth or octave, *e. g.*



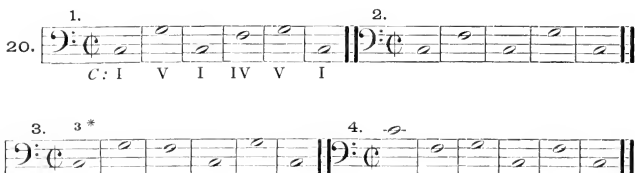
Open parallel fifths and octaves for harmonic connections are never admissible; the worth of *covered* fifths and octaves will be discussed later (Chap. XVII.) ; for the present this must be left for oral instruction, as, in general, with a correct understanding of the exercises, there will be, at present, little opportunity for errors in making objectionable fifths and octaves.

REMARK.—The beginner will do well, when working out his first exercises, to pay no attention to *covered* fifths and octaves, because, in his anxiety to avoid them, the first principles of chord connection are violated, and worse faults may easily arise.

Exercises.

The next exercise will be to employ the three primary triads in connection with each other, musically and with observance of the rules thus far established.

For this purpose we select the following bass progression :



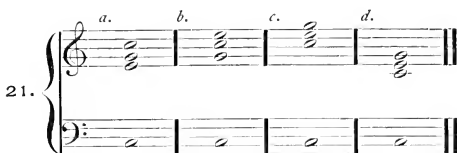
*When a figure appears over the *first* bass note the soprano should take the interval indicated; thus, 3 indicates the third of the chord, 5, the fifth, etc.

REMARK.—These, and all following exercises, indicate the way and method in which our exercises will proceed. They should be continued as long as the subject in hand requires it.

The disposal of the three upper voices of the first chord, which are to be added, will give occasion for important remarks. We have already seen in example 5, that the situation of the voices in a chord may vary greatly. This situation of the voices is called the **position of the chord**.

Close and Open Position.

A chord is said to be in **close position**, when the upper voices lie so near each other that neither the soprano nor tenor, if transposed an octave, would fall between the other two voices, the bass being more or less distant, *e. g.*



The first position of the chord, *a*, is so changed in *b*, that the former E of the tenor is placed an octave higher in the soprano; in *c*, the case is the same with both tones G and E; in *d*, the C of the soprano is placed an octave lower and becomes the tenor. In all these transpositions the distribution is altered, but the *close position* is still retained.

It is otherwise when the chord appears in **open position** (also called dispersed, sometimes extended position), which is the case if either the soprano can be placed between the alto and tenor, or the tenor between the alto and soprano, so that the result will be close, *e. g.*



At *a*, the chord appears in open position; by transposing the G an octave higher (between alto and soprano), in close position, as at *b*; the same at *c* and *d*. At *f*, the G of the soprano of the chord at *e* is placed an octave lower and between alto and tenor.

The following situation of the voices, *a*, (No. 23) would not, however, be an open position in this sense, for by transposing the tenor, the situation of the upper voices would not be changed, *b*, and only the transposition of the soprano would give the chord in the real open position, as at *c*.



The open position, although it makes the chord appear fuller, is not always to be used, not being clear enough to the view; therefore, for the present, the exercises will be written in close position.

REMARK.— It will always be better, at first, to write the examples in close position, and only use the open position later, from the exercises in the second and third part, where it will be found necessary. By using the open position in the beginning, the pupil stumbles upon difficulties which is not to our immediate purpose to surmount, and which may, therefore, be better to avoid.

The different positions do not usually appear singly, but occur together, as the leading of the voices requires.

The position of the *first* chord having been decided, the chords following are no longer so free that their positions may be chosen at will, but must be governed by the rules already given for the connection of chords. (Pages 25 and 26.)

The connection of chords and leading of voices in the first exercise, No. 20, may be as follows:



The natural relationship of these chords to one another can be clearly seen by observing the *connections*. But especially from the last two chords does the close connection show how one completes the other. From the feeling of rest and satisfaction induced by the concluding progression in the above example, it has been named the **authentic close or cadence**.



Another form of close, or cadence, is formed through the subdominant triad, as in No. 20, fourth example, and is called the **plagal close or cadence**.



N. B. The last chord of a cadence (close) always falls on the accented part of the measure. — ED.

Of these and other kinds of close, we cannot speak at length until later.

In order to become accustomed to the succession of chords which occurs when the bass progresses by degrees (as in Ex. 24, F—G), it would be advisable to write out the progressions IV—V and V—IV, in various positions and keys.

The Triads of the Remaining Degrees of the Major Scale.

All the triads situated on the remaining degrees of the major scale, although they certainly belong to that scale, do not indicate it so plainly as, for instance, the chord connection V—I.

These triads are called, to distinguish them from the primary triads, **secondary triads**.

SECONDARY TRIADS.

They are situated upon the second, third, sixth and seventh degrees of the scale.

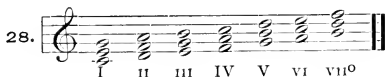


The triads of the second, third and sixth degrees are minor triads, as their thirds are minor and their fifths perfect.

The triad of the seventh degree differs from all the others, since, beside the minor third, it has a *diminished fifth*; hence, it is called the **diminished triad**.

In order to distinguish between major and minor triads in the system of Roman numerals under the bass notes, we will employ a large numeral for the major, a small one for the minor, and for the diminished triad we add a °, as above, VII°, a method introduced by the theorist, G. Weber.

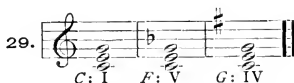
All the triads of the major scale will now stand thus:



REMARK. — The beginner must beware of mistaking any of these chords for *tonic* triads, an error which makes an insight of harmonic relations much more difficult.

As long as the key remains in C major, as in the above example, the various chords of F, G, D, and C, are merely chords of the different degrees of C major, and cannot belong to the key of F, or G, unless such keys are reached by and through *modulation*.

Hereby arises an ambiguity of the chords which should be carefully noticed. Each triad can belong to different keys. Thus, in the following example, the major triad of C can be:




If, therefore, with respect to this chord, C major is spoken of (meaning the key, according to ordinary usage) this would be true only in the first case where the C major triad stands on the *first* degree, but in all other cases is incorrect.

Application.

No new rules are required, at present, for the connection of the secondary chords with each other, or with the three primary triads. Several new features will appear, however, in this connection.


The bass can move either by **skips** or by **degrees**. In the former case there will always be a connecting tone, a tone common to two consecutive chords, and this tone should be allowed to *remain in the same voice*, as shown in Ex. 24. In the latter case there will be *no* connecting tone, and the voices must be led in *contrary motion* with the bass, in order to establish the inner connection of the chords.

a. THE BASS MOVES BY SKIPS.

30. 

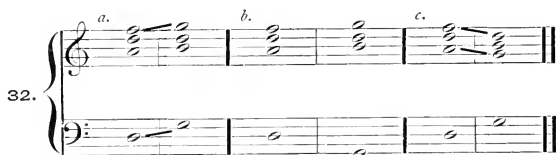
In the above example, the bass proceeds by skips of various degrees, the upper parts being connected by tones common to both chords, *and which remain in the same voice*. There are exceptions in many cases, however, to this rule.

In Ex. 30, at N. B., is a progression of the voices formed according to this rule, where are found covered octaves between the tenor and bass, which it would be better to avoid by means of the progression which follows. Though the *local* connection would thus be lacking, still, the *inner* connection is present, as the D of the soprano in the *first* chord can easily be imagined as being doubled in the lower octave, when the connection at once becomes plain, as in Ex. 31 :

31. 

REMARK. — The reason why just *this* tone should be imagined as being doubled, since that might be the case with any other, is based upon the fact that it is the *fundamental* — the tone which determines the whole character of the chord.

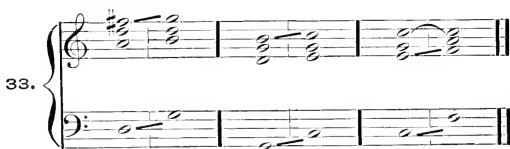
The reason why such covered octaves are unpleasant is because the upper voice proceeds a *whole step*, and is more noticeable still it contained in an outer voice, as in Ex. 32, at *a*.



Contrary motion of the bass, as at *b*, would improve the progression, also, by contrary motion, as at *c*, although here a covered fifth shows itself between the soprano and tenor. (See the Remarks on Ex. 34.)

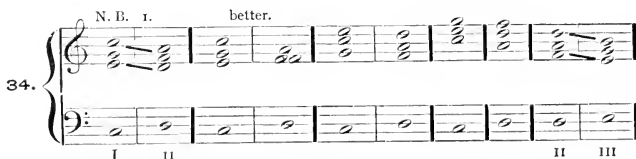
REMARK.—In the cases given above, we do not speak of absolute faults. If we are given entire control of *all* the parts, much can be avoided which under other circumstances, for instance, in treating a *cantus firmus*, or a motive, or for other reasons regarding the composition, is impossible. The improvement is here only given from a theoretical stand-point. Regarding the covered fifth in No. 32, *c*, further remarks follow under No. 34.

Covered octaves cease to have any unpleasant effect when the upper voice proceeds by a **half step**, e. g.



b. THE BASS MOVES BY DEGREES.

Here contrary motion will always be employed, e. g.



better. better.

III IV

N. B. 2.

IV V V VI V IV II I

In all progressions like that at N. B. 1 (I-II), and subsequent like places, it is better to double the *third* in the second chord, in order to avoid the covered fifths between soprano and tenor. Their unpleasant effect is still more preceptible when the chords are in open position :—

35. a. b.

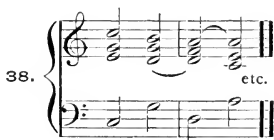
The progression at *b* is preferable. If, however, the covered fifths are between the middle voices, they are not so perceptible, and therefore less objectionable :

36.

At N. B. 2, the doubling of the third in the second chord is not always feasible, because the doubling of the seventh degree (in Ex. 34, the B of the second chord) is usually to be avoided.

The treatment of this tone, which is called the **leading tone**, will be further discussed in connection with the exercises which follow.

melodic progression is called a **sequence**, and demands a corresponding regularity in the other voices. This regularity could not be obtained by working exactly according to the rules already given, thus :



It will therefore be necessary to lead the soprano by a skip at the end of the first measure, in order to bring the *first chord in each measure* into the same position, and thus preserve the *uniformity* of the sequence. The following will make it plain.



In the first example, the covered octaves are tolerated on account of the sequence, but they cannot be allowed in the outer voices. The first exercise in No. 37 can also be worked as a sequence.

In the third measure of Ex. 4, we find a chord which we have not yet used, called the **diminished triad**. This chord rests upon the seventh degree of the major scale, and is not as independent as those on the other degrees, since its diminished fifth, which is a dissonance, plainly indicates a progression. The natural progression of diminished intervals is, in general, that both tones approach each other by a degree (*a*), or that one moves while the other remains stationary (*b*, *c*), a sort of progression which only becomes plain by actual chord-connection.



In the third which follows the diminished fifth (triad), the triad on

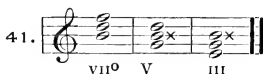
the first degree (*c*) will appear in an incomplete form—without its fifth, as at *d*.

Since, according to the relations of intervals in regard to inversion (which has been explained under “intervals”), an augmented fourth results from the diminished fifth, its progression will also take place in an inverted manner. (See 40, *e*.)

N. B. It should be noticed that the fundamental *rises* and the fifth *falls* in the inversion, just the same as in the fundamental position of the chord. The tendency of the half-steps to proceed to the *nearest* tones is thus shown.—ED.

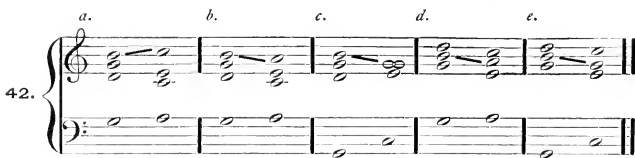
The fundamental tone, upon which the diminished triad is formed, is called the **leading tone**.

It serves as *third* in the dominant triad, and as *fifth* in the triad on the third degree.



As the *leading tone*, of itself, is *heard very distinctly*, it is *not doubled* in simple four-part harmony. Also, its progression should be *upward a half-step to the tonic*, providing that tone is contained in the next chord.

This tendency to an upward progression lies in the melodic character of the leading tone, as it stands but a half-step below the tonic of the scale. This is particularly observable in the dominant triad, when the leading tone appears in the highest voice, as Ex. 42, *a*, is more satisfying than *b* or *c*.



When appearing in a middle voice the upward tendency is not so decided, as at *d*. Skips from the leading tone downward, when taken by the upper voice (*c*) are intolerable, but when in a middle voice can be taken *if the bass moves in contrary motion*, as at *e*.

In Ex. 39, in the third measure, at N. B., the leading tone is found doubled and progressing *contrary* to the above rule. Both were the result of the *sequence* contained in the example, which would not admit of change in the position or progression of the chords.

On the More Complete Formation of the Close.

The close by means of the dominant chord (authentic close), appears in a still more definite form in the last examples. For, while the natural relationship of the dominant triad to that of the tonic makes these two chords the most suitable for the formation of the close, in the first and second exercises of Ex. 37 may be observed a preparation of a close by means of the triad on the *second degree*, which bears the same relation to the chord of the dominant as this latter does to the tonic triad, *e. g.*

43.

II V I II V I

Instead of the triad on the second degree, the subdominant can also be used to prepare the authentic close, *e. g.*

44.

IV V I

The forms of closing resulting from this connection of chords, will assume a more definite form by the use of chords to be explained hereafter.

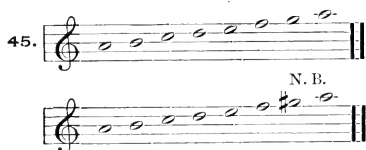
CHAPTER II.

THE TRIADS OF THE MINOR SCALE.

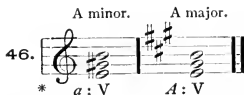
a. Primary Triads.

The primary triads of the major scale were found on the *first*, *fourth*, and *fifth* degrees. Those of the *minor scale* are found on the *same degrees*.

The peculiar *final* feeling induced by the authentic close, is caused by the fact that the last chord but one contains the seventh degree of the scale, or leading tone, and that this tone is only a half-step distant from the tonic, or key-note. For if the seventh degree were distant from the tonic a *whole* step, which according to the signature of the minor scale is the case, it would not possess the characteristics of the leading tone. Therefore, to make the authentic close in the minor key, it is necessary to raise the seventh degree chromatically a half-step, by which means it acquires the character of the leading tone, *e. g.*



In consequence of this alteration the dominant triad is precisely the same in major or minor, or in other words, *the dominant is always a major triad*.



This will be clearly shown by comparing the close in both keys :

* In the *indications* below the staff, observe, that a large letter indicates a *major key*, a small letter a *minor key*, a large Roman numeral a *major triad*, a small numeral a *minor triad*, etc.—ED.

47. C major. C minor.

The exercise shows two musical staves. The top staff is in treble clef and the bottom in bass clef. The first part, labeled 'C major.', shows a C major triad (C-E-G) in both staves. The second part, labeled 'C minor.', shows a C minor triad (C-Eb-G) in both staves.

As a proof, however, that a similar alteration of the sixth degree is not allowable in harmony, though continually adopted in melody, it is only necessary to examine the plagal close, shown at *a* in the following example, which, it will readily be seen, could not possibly be conceived of, as at *b*.

48. In A minor.

a. *b.* *a.* *b.*

The exercise shows two musical staves. The top staff is in treble clef and the bottom in bass clef. The first part, labeled 'a.', shows a plagal close in A minor (A-C-E in bass, A-C-E in treble). The second part, labeled 'b.', shows a plagal close in A minor (A-C-E in bass, A-C-E in treble). Below the staves, the Roman numerals 'c: IV' and 'I' are written under the first part, and 'c: IV' and 'I' are written under the second part.

The three primary triads of the minor scale and their relationship, may be shown thus:

49.

The exercise shows a single musical staff in bass clef. It contains three triads: IV (F-A-C), I (A-C-E), and V (E-G-B). Below the staff, the Roman numerals 'IV', 'I', and 'V' are written under each triad.

The minor scale, as a basis for the harmonic structure, will therefore stand thus:

50.

I $\frac{1}{2}$ I I $\frac{1}{2}$ $1\frac{1}{2}$ $\frac{1}{2}$

The exercise shows a single musical staff in bass clef. It contains the notes of the minor scale: A, B, C, D, E, F, G, A. Above the notes, the intervals are indicated: I (A-B), $\frac{1}{2}$ (B-C), I (C-D), I (D-E), $\frac{1}{2}$ (E-F), $1\frac{1}{2}$ (F-G), and $\frac{1}{2}$ (G-A).

REMARK.—All other forms of the minor scale, as:

51.

The exercise shows a single musical staff in treble clef. It contains the notes of the minor scale: A, B, C, D, E, F, G, A. The key signature changes from one flat to two flats (Bb) at the end of the scale.

also found upon the *seventh* degree. The *sixth* degree forms here a *major* triad. The *third* degree produces a new form of the triad. It has a *major third* and an *augmented fifth* and is known as the **augmented triad**.

The peculiar nature of this chord renders its connection with other chords in the same key very difficult; therefore, it can seldom be used as the *fundamental harmony of the third degree* of the minor scale. The following examples show this:

55.

I II° IV V VI VII°

Of these examples, those under *c* and *e* will be the most useful. The introduction of this chord is still more difficult:

56.

I II° IV V VI

Its introduction is the most agreeable when the augmented fifth has been heard in the previous chord, that is, has been prepared, as under *d*.

REMARK.—There seems to be something peculiarly foreign in the triad on the third degree, whether in the major or minor scale, so that, even when it appears simply as a minor triad in the major scale, it is very difficult to connect it naturally with other chords, and is therefore seldom used.

Most of the practicable chord-connections shown above will occur in other situations which will not allow the augmented triad to be recognized as the triad belonging on the *third degree of the minor scale*. The augmented triad which is so much used in modern music, belongs to the **chromatically altered chords**, and will be explained in Chap. X, on Altered Chords.

Application.

The principles concerning the connection of harmonies and the leading of voices which have been so far developed, will be particularly applicable to the connection of the primary chords in minor. What was said regarding the progression of the leading tone, comes very prominently into view in consequence of the step of an augmented second occurring between the sixth and seventh degrees of the minor scale, which step has to be avoided either ascending or descending as *unmelodious*, if both tones, which include the interval of an augmented second, *belong to different harmonies*, *e. g.*

57. a. b.

V VI VI V

Therefore, in connecting the triads of the fifth and sixth degrees, which is a very common progression, it will be necessary to carry the leading tone upward, in consequence of which the triad on the sixth degree will appear with its *third doubled*, *e. g.*

58.

V VI V VI V VI VI V VI V

Thus, it would be impossible to present correctly the example given under 57, *b*, without making use of an intermediate tone, as for example :

59.

REMARK. — Practice deviates from this rule in certain special cases. But it will be well to become accustomed to the above leading of the voices, because we must not overlook the fact that every *deviation* from the rules in practice should be only a well founded exception, whereas the *observance* of them can be cited in numberless cases.

Exercises in Connecting the Triads of the Minor Scale.

60.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

Remarks on these Exercises.

A chromatic sign over a bass note without any figure, as in the third measure of the first exercise, has reference always to the *third*

of the bass note. This raising of the *third* in the dominant chord, is the raising of the leading tone previously spoken of, and is of frequent occurrence in the minor mode.

As a rule, the triad is not *figured* in thorough-bass notation, when the bass has the fundamental, unless there are special reasons for marking it with 3, 5, 8, $\frac{5}{3}$, or in full, by $\frac{8}{3}$. In the third and sixth exercises the augmented triad has been introduced and the “5 \sharp ” placed over the bass note signifies that the fifth must be sharpened, as it is the leading tone, as well as the augmented fifth of the triad. The figures 3, 5, or 8 over the first bass note of some exercises indicates, as has been said before, its position. If there be no figure over it, the soprano must take the octave of the bass.

The fundamental principles thus far developed will be illustrated by the working out of an exercise. For this purpose we select the first exercise of No. 60.

61. 

a: I VI IV II° V I

Here the first principle of the connection of chords (by connecting tones in the same voice) is observed throughout, and consequently the alto, at N. B., makes the forbidden step of an augmented second from F to G \sharp .

In order to avoid this defect, the alto must be led from F to E, the soprano from B to G \sharp , and the tenor by a skip from D to B, thus:

62. 

II° V I

or the soprano retains the B while the tenor falls from D to G \sharp , and

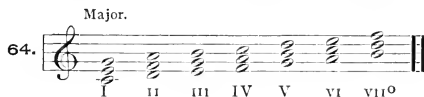
the alto from F to E, thus quitting the close position, while the following harmony is brought into open position.



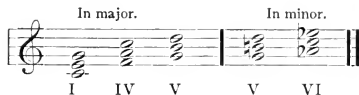
NOTE.—The best way to overcome the difficulties in connecting the triad of the second degree with that of the fifth ($\text{II}-\text{V}$ or $\text{II}^\circ-\text{V}$), in major as well as minor, is to remember to lead *all* the upper voices *downward* from the second degree triad to the next chord. By taking particular notice of the “indications” when writing them under the basses (and they should *always* be placed there *before beginning* to work out the exercise), the $\text{II}-\text{V}$, or $\text{II}^\circ-\text{V}$, which occurs constantly, will serve to remind the student of the correct manner of leading the voices.—ED.

Before proceeding to the further employment of the triads, we here give a view of all the chords thus far found.

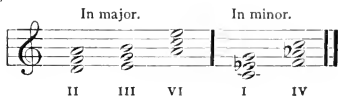
View of All Triads of the Major and Minor Scales.



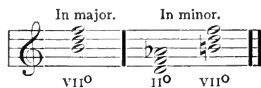
Major triads are found



Minor triads



Diminished triads



Augmented triad



CHAPTER III.

THE INVERSIONS OF THE TRIADS.

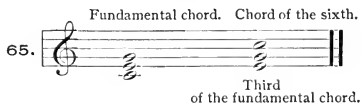
The Chord of the Sixth, the Chord of the Sixth and Fourth.

The employment of the triads, as well as all fundamental chords, is not confined to the positions shown in the foregoing examples, where the *fundamental* alone is used as the bass. The *third* or *fifth* of the original chord may also serve as the bass. Thus arise transformations of the fundamental chords, which are termed **inversions** of the chord.

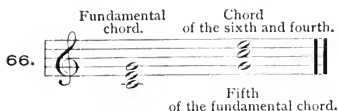
REMARK.—It should be particularly noticed, that here only a *change of the bass to another interval of the chord* is spoken of, and the transpositions of the other voices into close and open position, and to various intervals, previously mentioned, *do not alter the chord essentially*.

Two inversions of the triad are possible :

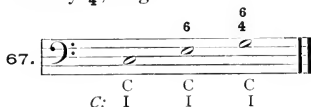
a. When the bass takes the *third* of the triad, the chord thus formed is called the **chord of the sixth**.



b. When the bass takes the *fifth* of the triad, there is formed the **chord of the sixth and fourth**.



The chord of the *sixth* is indicated by 6 over the bass note, that of the *sixth and fourth* by $\frac{6}{4}$; e. g.



It should be observed that the Roman numerals *under* the bass continue to indicate the degree of the scale on which the *fundamental is situated*, and do *not* refer to the position of the bass.

Thus, in Ex. 67, the three chords are all indicated by I, although the *bass* of each is on a different degree of the scale, because they are all *derived* from one and the same *fundamental*, namely, C.

Similar inversions may be derived from all the triads.

Application.

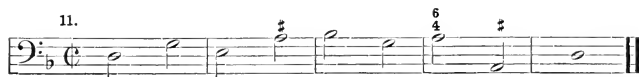
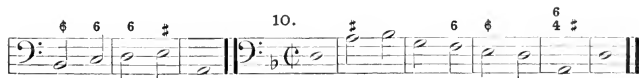
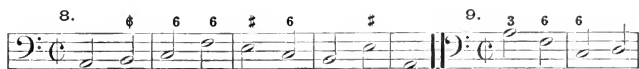
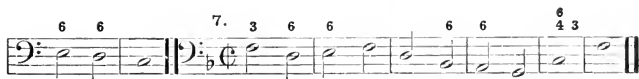
By means of the inversions of chords, the harmony obtains greater variety, and the progression of the individual parts, and especially of the bass, becomes more flowing.

According to the rules for the doubling of an interval of the triad (page 25), it will be better in the chord of the sixth to double the fundamental of the original chord. The doubling of the *bass tone* must only take place when the *natural progression* of parts seems to require it, or to avoid certain faults. The leading tone should never be doubled, whether it appears as *third* in the dominant chord, or as *bass* in the chord of the sixth.

The position of the three upper voices in either of the inversions depends upon the natural progression of the voices, and has no influence on the chord itself.

The *chord of the sixth* can appear in the following forms :

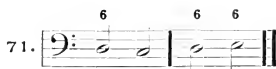




Remarks on the Above Exercises.

In the first measure of Ex. 2, the position of the chord is indicated by the figure 5 being placed over the *first* bass note, as before explained. The chord is therefore to be written with the fifth in the soprano, or upper part. If no figure stands over the first bass note it is understood that the soprano must take the octave of the bass.

The *diminished triad* (on the seventh degree, VII^o) appears in its inverted form as *chord of the sixth*, in the second exercise, second measure. It is most used in this form. It may be remembered that the fundamental of this chord, being the leading tone, is *not* to be doubled. In most cases the *third* (bass tone) is doubled, but sometimes the leading of the voices occasions the doubling of the fifth. The diminished triad of the *second degree in minor* (II^o) allows the doubling of the *fundamental*, that not being a leading tone. The progression of the diminished triad always depends on the leading of the bass, which in most cases is as follows :



and the upper parts may then proceed thus :

72.

From the above examples it is evident that the inversion of the diminished fifth, that is, the augmented fourth, does not require so strict a resolution in *four parts* as was given in Ex. 40, for the same interval in *two parts*. Thus, in the first example, and others, we see B of the soprano and F of the alto progress to C in the soprano and G in the alto.

73.

As this chord has a similar sound to the chord of the dominant seventh, beginners often feel the necessity of leading the original diminished fifth downward, even when it has been changed by inversion into the augmented fourth. As the examples show, this is only necessary when the diminished fifth appears *above* the fundamental. A progression like the following would be faulty on account of the parallel fifths.

74.

It may here be observed that parallel fifths, the *second of which is diminished*, are allowable, but a *perfect* should not follow a *diminished fifth*.

75.

The progression of the voices in the inversion of the diminished triad, takes a different form when the bass does not proceed to the tonic triad. Here follow a few chord-connections :

76. Not pure.

VII° III VII° IV — — VII° V

Better. Not.

VII° VI — — —

Not.

— VII° II — — — and others.

The diminished triad on the second degree in minor is capable of yet other resolutions, as its fundamental can be doubled.

The succession of two or more chords of the sixth on a bass which moves by degrees, as in Ex. 70, No. 3, and others, requires that one or more of the upper parts shall move in contrary motion to the bass ; and generally that the bass shall be doubled in one if not both chords.

77.

6 6 6 6 6 6 6 6 6 6 6 6

The *sequence* of chords of the sixth in the fifth and sixth exercises of No. 70 is best accompanied when the regular movement of the bass is carried out in all the other parts also, thus :



Covered octaves, such as occur between tenor and bass in the second and third measures, are not to be avoided in such cases. In fact, exceptional progressions like the above must sometimes be permitted, when to have adhered strictly to rule would be to mar the proportion of the phrase.

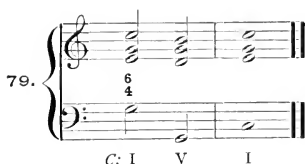
REMARK.—That the principle just laid down can be easily misunderstood by the beginner is evident. But the statement of the principle was unavoidable. To avoid all possible error, it may be added, that a final decision on these points is only possible to a judgment fully ripened by experience and practice.

The Signs used in Thorough-Bass Notation.

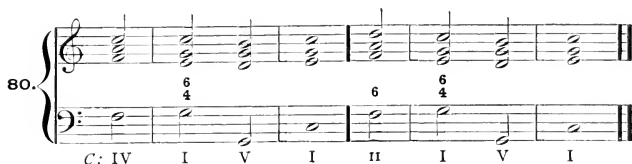
The figures and signs in thorough-bass are called in general, **signatures**. Some of them have been already explained, as the chromatic sign so much used in minor. The figuring of the chords of the sixth and of the sixth and fourth was given on page 51. A stroke through the figure is used when a chromatic elevation of the interval is required, for example, in exercises 8, 9, 10, of No. 70, a stroke through the 6 : 6 ; instead of which, however, a \sharp or \flat is often placed by the side of the figure, for example, 6 \sharp or 6 \flat , 5 \sharp . Other figures will be explained later in connection with the chords where they are used.

Formation of the Close through the Chord of the Sixth and Fourth.

In the exercises of No. 70 we find the close, already mentioned, rendered clearer and more decided by the chord of the sixth and fourth ; and it may be accepted as a rule that the second inversion of the *tonic triad* (chord of $\frac{6}{4}$), *when followed by the dominant*, has a strong tendency towards an authentic close, or cadence.



The chord of the sixth and fourth is often preceded by the triad on the fourth (subdominant) or second degree.

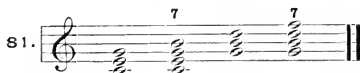


Notwithstanding the effectiveness of the chord of the sixth and fourth in the above position, and also in modulations into foreign keys, yet, under other circumstances, its entrance is extremely weak, and its employment is therefore subject to certain conditions which will be mentioned later.

CHAPTER IV.

HARMONIES OF THE SEVENTH; CHORDS OF FOUR TONES.

The chords of the seventh are founded upon the triads. They result from the addition of another third above the fifth of the triad, thus forming a seventh from the fundamental:



In addition to the various kinds of triads, the different kinds of sevenths will afford a variety of harmonies of the seventh.

NOTE.—Chords of the seventh may also be formed by adding a third *below* the fundamental of a triad. Thus, the subdominant *triad* may be changed to a *chord of the seventh* on the second degree in the following manner:

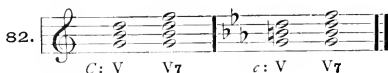


General Properties of the Seventh Chords.

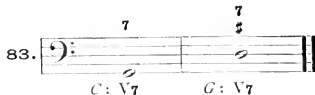
The chords of the seventh are not so independent as most of the triads, but have a distinct tendency towards a resolution. On this account they can appear only in connection with other harmonies. On the other hand, they render the relationship of one chord to another more close and intimate, and by means of this quality offer particularly excellent advantages for the connection of chords and leading of the voices.

The Chord of the Dominant Seventh in Major and Minor.

Of all the chords of the seventh, the most important is the **chord of the dominant seventh**. It is also called the **primary chord of the seventh**. Like the dominant triad, it rests upon the fifth degree, and is formed *precisely alike* in major and minor, namely, from the major triad and minor seventh:



Its fundamental position is indicated by a 7 over the bass note, and in our system of notation by V7:



The relation which the dominant triad bears to that of the tonic has been already shown by means of the close (see page 33), and the impression of finality created by the cadence will be much strengthened by the addition of the seventh. The following connection of chords will exhibit the formation of the close:

84.

C: V7 I a: V7 I

REMARK.—Observe that the chord of the tonic which follows the dominant seventh chord is incomplete; in both cases the fifth is omitted. The reason of this will be perceived from what follows.

The marked tendency towards a resting-place or close, inherent in these chords, and their consequent connection with a triad, is called **resolution of the chord of the seventh** (cadence).

If the chord is resolved into the tonic triad, as in Ex. 84, or in a similar manner, it is called a **closing cadence**.

The progression of the intervals of the chord of the seventh will make necessary some important remarks.

First, we regard the closing cadence as the *regular* resolution of the dominant seventh chord especially.

The seventh, as the essential interval of the chord, is, from its relation to the fundamental, restricted to a stated progression. The progression of the bass being given, an *upward* resolution of the seventh would seem impossible:

85.

even if a third voice be added, as at *b*; whereas its *downward* movement will be entirely satisfactory to the ear.

86.

Since the progression of the *fundamental* by a skip upward of a fourth or downward by a fifth is already determined, the leading of the *third* and *fifth* of the chord of the seventh remains to be considered.

The *third* of the chord of the dominant seventh is always the leading tone of the scale: its natural tendency is, therefore, upward a half step to the tonic. Thus, in the following example, *a* is more satisfactory than *b*:

87. *a.* *b.*

In Ex. 87, *b*, the third is given to the upper voice, which makes the unnatural progression very conspicuous. If the third appears in a middle voice, this leading becomes less unpleasant, *e. g.*

88. *a.* *b.*

V7 I V7 I

This downward leading of the third (leading tone) is therefore allowable under the following conditions:

a. When it lies in a *middle voice*, but *not* when in an upper part, *e. g.*

Seldom used.

89.

b. When the bass moves in contrary motion with it, *e. g.*

a. *b.* Not.

90.

The reason for the second rule is evident, if we observe the covered fifths between alto and bass in the last example at *b*.

The leading of the *fifth* of the chord of the seventh is free. While it usually *descends* one degree, through the downward pressure of the seventh, the progression of the voices may require it to *ascend*, as in Ex. 88, *b*, where the D of the soprano is led to the E in the next chord.

If we summarize these remarks, the following rules are established for the regular resolution of the chord of the seventh, and for the closing cadence especially:

- The seventh descends a diatonic degree;
- The fundamental skips a fourth upward or a fifth downward;
- The third ascends a degree in contrary motion with the seventh;
- The fifth can either ascend or descend one degree.

REMARK.—The relationship of the third and seventh to one another recalls what has already been said on the resolution of the diminished fifth, this interval being again found and similarly treated in the chord of the dominant seventh:



Application.

The chord of the dominant seventh, as thus far known to us, seldom occurs in the middle of a composition, but when it is so employed the feeling of a perfect close should be avoided.

This result may be attained by giving the seventh to the upper part, which will render the close incomplete; or by causing the dominant seventh chord to fall upon the accented part of the measure, whereas, in the perfect close (complete cadence) the tonic triad must fall there. (See Ex. 25.)

The chord of the seventh often appears incomplete by the omission of one interval, generally the fifth. The third is very seldom omitted, and the omission of either the fundamental or seventh would of course destroy its identity.

91.

a. b. c. Seldom. d.

V7 I V7 I

In the above example, at *a*, *b*, and *d*, the fifth is omitted; at *c*, the third; and in each case the fundamental is doubled instead, by which means the closest connection is obtained with the following chord through the tone which remains stationary, and allows the tonic triad to again appear complete. This could not be the case if the fundamental of the seventh chord were not doubled. (See No. 84.)

The following remark concerning the omission of an interval in the chord is added:

Through the leading of the voices, a chord may appear *incomplete*; in most cases the omitted interval will be the *fifth* of the fundamental chord.

Exercises.

92.

1. 3, 7, 6 6 4 7

2. 6, 6 6, 7

3. 3, 6 6, 6 6, 7 6 4 7

4. 5, 6 7, 6 4 3, 6 4 7

5. 3 6, 7 6 4 6, 6 6 4 7

6. 6 6, 7 6, 6 4 7

7. 6 6, 7 6 7, 6 5 4 3 7



NOTE. In the sixth measure of Ex. 4, of the above exercises, the same division of the measure into two halves takes place which has been noticed before in No. 70. Here the first half of the measure requires the tonic (G_2) followed by the chord of the seventh in the last half of the measure. In the fifth measure of Ex. 7, the *second chord* is that of the tonic (G_2), then follows the dominant triad, its *fifth* passing afterwards (by skip) to the *seventh*. It should be remembered that accidentals placed *over* bass notes always refer to the *third* of that note; when placed *by the side of figures*, they indicate that *that interval above the bass* must be raised or lowered, as the case may be.—Ed.

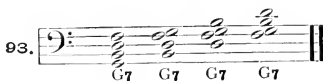
CHAPTER V.

THE INVERSIONS OF THE CHORD OF THE SEVENTH.

The inversions of the chord of the seventh are formed in the same manner as those of the triad.

The first inversion is formed by taking the *third* of the chord for the bass; *the second*, by giving the *fifth* to the bass; and *the third*, when the bass receives the *original seventh*.

In close position the inversions appear thus :



A comparison of these inversions of the chord of the seventh, with those of the simple triad, will show their relative positions :



These derived chords receive their names from the intervals which are found over the bass :

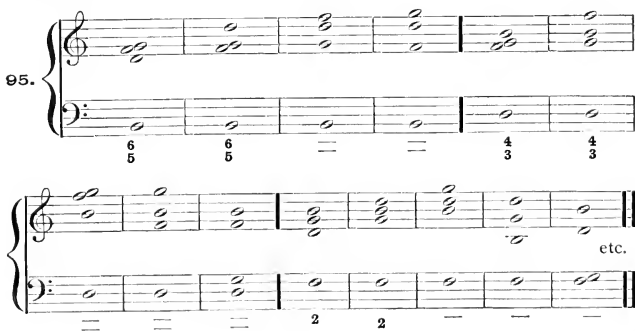
The *first* inversion is called the **chord of the sixth and fifth**.

The *second* : the **chord of the sixth, fourth, and third**, or briefly, the **chord of the fourth and third**.

The *third* : the **chord of the sixth, fourth and second**, or briefly, the **chord of the second**.

The thorough-bass figuring may be seen above, in Ex. 94.

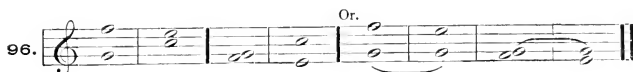
As is the case with the inversions of the triad, these chords depend only on the position of the bass, and the upper voices may be arranged in various ways, *e. g.*



Application.

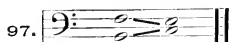
The regular progression (resolution) of these derived chords is founded on that of the original chord.

As the *dissonance*, the seventh, caused the progression of it in one direction, the tendency to the same progression will exist in the derived chords where the fundamental and seventh appear again, or the two tones become seconds by inversion.



Progression of the Chord of the Sixth and Fifth.

In the chord of the sixth and fifth, the original seventh still forms a dissonance with the bass, but in this case it is a diminished fifth, the resolution of which has already been explained.



The resolution of the complete chord of the sixth and fifth will naturally be as follows :



That is, all the voices (except the fundamental G) will have the same progression as they had in the original chord. The fundamental remains stationary, as it is not suited to the character of an upper or middle part to proceed by such large intervals as the fundamental did when it appeared as bass of the original chord. That the G, however, forms the foundation of this connection of harmony, is shown by the marking G7—C, in Ex. 98.

REMARK.—Different progressions of the fundamental, due to a freer leading of the voices, are not hereby excluded, but there must be an inner connection between the chords.

Progression of the Chord of the Sixth, Fourth, and Third.

This chord contains between its component parts not only the interval of a seventh, or its inversion, the second, but also that of the diminished fifth, or its inversion, the augmented fourth.



The resolution of this chord follows thus :



The bass, being the original fifth, is free to move both ways.

Progression of the Chord of the Second.

This chord has the peculiarity, that the dissonances of the original chord, the *seventh* and the *diminished fifth*, can only appear in their inverted form, as *second below*, and *augmented fourth below*.

The resolution of this chord is to a chord of the sixth on the tonic :



It will be seen that all these resolutions are based upon the natural progression of the dominant seventh chord (cadence), since we find throughout the same marking of the fundamentals, G_7 C, or V_7 I.

Therefore, these resolutions will of themselves form cadences, but not so complete as those mentioned before. As those were called **perfect cadences**, we describe these as **imperfect cadences**.

NOTE.—In the inversions of the chord of the seventh all of the four intervals are usually present, the three upper voices taking those not required by the bass, which latter is seldom doubled in four-part harmony.—ED.

View of the Natural Progression of all Inversions of the Chord of the Dominant Seventh in Various Positions.

a. THE CHORD OF THE SIXTH AND FIFTH.

102.

6 5 6 5 6 5 6 5 6 5 6 5

G₇ C

b. THE CHORD OF THE SIXTH, FOURTH AND THIRD.

Or.

4 3 4 3 6 4 3 4 3 4 3 4 3

G₇ C

c. THE CHORD OF THE SECOND.

2 6 2 6 2 6 2 6 2 6 2 6 2 6

G₇ C

Exercises for using these Chords.

103. 



















NOTE.—In the seventh measure of the last exercise will be found the *augmented triad* on the 3d degree of *c* minor, introduced by leading the soprano from *ab*, through *g* to *f*. The *g* could also be regarded as a “passing note.” Worked out, the passage will appear thus :

CHAPTER VI.

SECONDARY HARMONIES OF THE SEVENTH.

Whereas with the triads, *three primary chords* are necessary to form the key, the tonic being the central point, only *one primary chord of the seventh*, that of the *dominant seventh* is needed, the contents of which alone makes the key certain, and whose resolution to the tonic triad represents it.

REMARK.—As the seventh of the dominant chord is also the fundamental of the subdominant triad, the relationship existing between the two tones G and F (as the fundamentals of the dominant triads) to their common center, C (as tonic triad), becomes clear.

Besides this chord of the dominant seventh, other chords of the seventh are possible on every degree of the major and minor scales. Their relationship to the key in which they occur is certainly undeniable, but not so decided as that of the *primary* chord of the seventh.

These chords of the seventh are called **secondary chords of the seventh**. They are formed by simply adding a seventh of the fundamental to the triads.

a. In major.

104.

I₇. II₇ III₇ IV₇. VI₇ VII[°]₇

b. In minor.

N. B.

I₇. II[°]₇ III[°]₇ IV₇ VI₇ VII[°]₇

We find here chord formations which have a somewhat harsh and foreign effect, because, as has been already observed, their relationship to a fundamental key is not so distinct and clear as that of the chord of the dominant seventh. They are therefore less frequently used, but are nevertheless well adapted to give variety and especial coloring to harmonic progressions.

Among these secondary chords of the seventh, the following kinds may be distinguished:

a. Major triads with major seventh.

In major. In minor.

105.

C: I₇. IV₇. a: VI₇.

N. B. Major triads with minor sevenths always form chords of the dominant seventh.

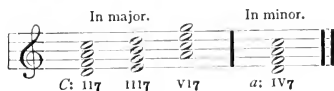
b. Minor triad with major seventh.

In minor.

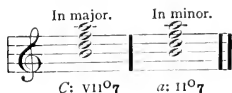
a: I[°]₇.

Not used as fundamental harmony.

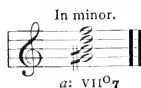
c. Minor triads with minor seventh.



d. Diminished triads with a minor seventh.



e. Diminished triad with a diminished seventh.



f. The augmented triad with a major seventh.



As it is found upon the third degree in minor, while not altogether useless for reasons already shown in the case of the augmented triad, is but seldom used, and ambiguous.

REMARK.—This chord will be found again in Chap. X, with a different foundation.

Application of the Secondary Chords of the Seventh in Major.

Whether the interval of the seventh (or its inversion, the second) be major, minor, diminished or augmented (the last concerns the second only), it will always form a dissonance with the fundamental, and as such will press to a resolution.

This natural resolution will be the same as that given to the dominant seventh chord, that is, the seventh will descend one degree, if the fundamental proceeds a fourth upward or a fifth downward.

Accordingly, if the progression of the principal intervals of the chord is found,



no new rules are needed for the other intervals; the third ascends one degree, while the fifth is free to move in either direction.

107.

C: I, IV, 117, V

The exceptional progression of the *third*, shown at *b* in the above example, is in order to avoid the covered octaves which would otherwise occur in the regular ascension of the third by a *whole step*.

108.

C: I, IV, I

Whether, however, it will be preferable to double the leading tone in the triad which follows the seventh chord, as at 107, *c*, or to employ the following covered fifths,

109.

C: I, IV, I

will depend upon circumstances, and can only be decided when particular cases arise.

Natural (Cadencing) Progression of the Secondary Chords of the Seventh in Major.

110. *a.*
Of the first degree. Or. Not.

C: I₇ IV

Good. Not. Or. Not.

With omission of the fifth.

b.
Of the second degree. Or.

C: II₇ V not: not:

Without fifth. Not.

c.
Of the third degree. Without fifth.

not: *C:III*₇ VI — not: — — — not: —

d.
Of the fourth degree (seldom with this resolution.)

Not good.

not: *C:IV*₇ VII⁰ — — not: —

Without fifth.

not: — — —

e.
Of the sixth degree. Without fifth.

not: *C:VI*₇ II — not: — — not: — not: —

f
Of the seventh degree.

Not good. Better.

not:
C: VII°₇ 111

Without fifth.

not:

REMARK.—The progressions of all the chords of the seventh given above are neither exhaustive in their positions, nor are they given as the only ones possible.

The only difficulty in making such progressions lies in the frequent occurrence of covered fifths and octaves. The remarks which are found above, such as “not,” “not good,” which refer mostly to the leading of the bass (as this in connection with the other necessary voice-movements produces these faults), are in many cases to be understood from a theoretical standpoint only. In practice, even in the so-called pure composition, such and similar cases must often be judged according to the principle heretofore stated under Ex. 78, page 56.

Theory not having yet succeeded in formulating *positive rules* for all cases of the kind, the true and the false, that which is admissible or inadmissible in this respect can only be ascertained through thorough harmonic culture and a correct musical ear.

Of the Peculiar Resolution of the Chord of the Seventh of the Seventh Degree.

In the above table, under No. 110, the same resolution has been given to *all* the chords of the seventh, including that on the seventh degree, which has been resolved into the *third degree*. In each case the fundamental proceeds a fourth upward or a fifth downward. This progression is the less frequent one, and is mostly used when the voices maintain a *regular movement*, as in sequences. A more usual progression, however, of this chord, is that founded on the resolution

of the diminished triad (from which this chord of the seventh is derived), which is to the tonic triad.

111.

a. *b.* *a.* *b.*

C: VII° I VII°₇ I VII° I VI,₆₇ I

The above examples show that the tendency of the diminished triad towards the tonic triad is not changed by the addition of the seventh, but is rendered even more decided.

Observe, also, that when the chord appears in the above position, the third of the following triad must be doubled, as at No. 111, *b.*, or parallel perfect fifths would arise, as at No. 112, *a.*

112.

a. *b.*

or the third of the chord must skip, as at *b.*, a leading of the tenor which frequently occurs, and which is very effective notwithstanding the covered octave between soprano and tenor.

This chord has the peculiarity that its only satisfactory position is when the seventh is heard in the upper voice, and that all the other positions, if not impracticable, appear uncertain and indistinct in their effect.

113.

2 6 4

REMARK.—Whether the reason of this lies in the fact that the seventh with the above resolution has the character of the ninth, which, though similar to the seventh, is much more comprehensive and does not admit of a middle position in the chord, cannot be further discussed here.

NOTE.—Many theorists give this chord as a chord of the ninth on the dominant with the fundamental omitted.—ED.

The Freer Treatment of the Third and Fifth in the Chord of the Seventh.

Different progressions of these intervals have already been used in the previous connections of chords. The *fifth* is led in either direction; also, the *third* is led a degree upward, or by a skip a third downward. This was generally for the purpose of avoiding covered fifths and octaves.

When these faulty progressions do not intervene, the *third*, especially, can move differently still, by means of which the movement of the voices becomes more free and independent, *e. g.*

114.

The musical notation shows three staves. The top staff is Soprano, the middle is Alto, and the bottom is Bass. Measure 1 (a.) has notes F4, A4, C5, E5 in the Soprano; F4, A4, C5 in the Alto; and F3, A2, C3 in the Bass. Measure 2 (b. Not good.) has notes B4, A4, C5, E5 in the Soprano; F4, A4, C5 in the Alto; and F3, A2, C3 in the Bass. Measure 3 (c.) has notes D5, A4, C5, E5 in the Soprano; F4, A4, C5 in the Alto; and F3, A2, C3 in the Bass. Measure 4 has notes F4, A4, C5, E5 in the Soprano; F4, A4, C5 in the Alto; and F3, A2, C3 in the Bass.

If the position admits of it, this leading is possible also in the middle voices, as at *c.*

The progression of the soprano at *b* is not good on account of the *skip of an augmented fourth*—from *f* to *b*—which is caused by it.

The skip from the *fourth* to the *seventh* degree is called the **tritone**, because it contains three whole tones. Regarding this more hereafter.

Different progressions of the fifth are only possible when the movement of the bass differs from that above given, which is that of a fundamental. If we seek for other chord-connections than those hitherto used, still other progressions of the voices will show themselves.

The Preparation of the Seventh.

The *progression* of the chords of the seventh has been spoken of, but nothing has been said of their *introduction*.

The harsh effect produced by the entrance of many of the dissonances, and especially of the seventh of the secondary chords of the seventh, renders a careful introduction of them necessary, which consists in their being **prepared**.

A tone is prepared, when it has been heard in the *preceding chord*, as a consonance, *and in the same voice*, so that it can be connected by a tie.

Such a preparation of a tone has already been had in the first chord-connection shown, *e. g.*



It may be said here that the C of the soprano in the second chord is prepared by the C in the first chord. The same applies to the G of the alto in the next example.

The necessity of the preparation of the sevenths is not due alone to their harshness when heard without preparation, but particularly from the character of *harmonic relationship and connection* of two successive chords, which is a prominent characteristic of sevenths, and which would not be felt without their preparation.

The preparation of the seventh may take place in the following or any similar manner :

116.

C: V I₇ IV V I₇ IV IV II₇ V I II V₇ I

C:III IV₇ VII^o V III₇ VI I VI₇ II IV VII^o₇ I

In each of the above examples the tone which is bound to the next one following by means of a tie, forms the preparation of the seventh.

In constructing such preparations the following rules must be observed :

a. The preparation must fall on the unaccented part of the measure (Arsis).

b. It must be of at least equal duration with the seventh by which it is followed. It may be longer, but never shorter, *e. g.*

Not.

117.

REMARK.—The preparation of the sevenths forms one of the most important parts of the theory of harmony, and is to be carefully and diligently practiced, because upon it depends the most important feature of the inner and most intimate harmonic connection.

Although here also exceptions on this point may be found in practice, still, it must be remembered that they are only exceptions, and do not disprove the importance of the principle of harmonic connection. Such exceptions can only be judged by their position and relation to the situation as a whole.

These exceptions occur mostly with the minor sevenths, as those on the second and seventh degrees, which are less harsh, and may always be improved by good leading of the voices.

The chord of the dominant seventh, however, being less foreign to the key, does not always require preparation. The note forming the interval of the seventh in this chord may be freely introduced, but in this case the *fundamental of the chord* should be already present in the *previous chord*, in order to preserve the progression of the parts pure and free from harshness.

118.

C: I V₇ I I V₇ I I V₇ I

NOTE.—In each of the above examples the fundamental of the chord of the dominant seventh is present in the previous chords, in the alto ; the seventh is therefore allowed to appear without preparation.—ED.

The chord of the seventh on the seventh degree of the major or minor scale may also be used without preparation.

119.

1. 3 7 7 6 6 6 4 7

2. 2 8 2 6 7 6 5 6 6 6 4 7

3. 3 6 7 7 6 6 5 6 4 7

4. 4 6 6 7 7 6 5 6 6 7

5. 5 8 7 7 7 7 6 5 7

6. 6 5 6 7 7 7 5 7

7. 7 3 7 6 7 2 6 6 6 6 7 7 5 7

Three staves of musical notation in bass clef, showing chord resolutions with figured bass numbers. The first staff contains the sequence: 8. 8 7 3 6 7 2 6 7 6 6 7. The second staff contains: 9. 3 7 6 2 6 7 3 3 6 6 6 4 7. The third staff contains: 10. 8 7 7 6 7 6 5 6 4 7. Each staff ends with a double bar line.

The Connection of the Chords of the Seventh with each other.

In the previous examples every chord of the seventh has been resolved into the *triad* on the *fourth degree* above, or which is the same thing fundamentally, a *fifth below*. Instead of the triad, a *chord of the seventh* can also follow the fundamental of the new chord being likewise a fourth above that of the first. No change takes place in the *resolution* on this account, but the *third* in the first chord of the seventh *remains stationary* in order to *prepare the seventh* in the next chord, *e. g.*

Example 120. Musical notation in grand staff (treble and bass clefs). The bass line shows a sequence of chords: C: II, V7, I7, IV. The treble line shows the corresponding chord voicings. The V7 and I7 chords have a 7 above them. The sequence ends with a double bar line.

Here the third of the dominant chord, the B, remains stationary and prepares the seventh of the next chord.

The peculiarity of the resolution of one seventh chord into another is, that in *one* of the chords the *fifth* will always *be lacking*. When several chords of the seventh follow each other, the omission of the *fifth* will take place in each *alternate* chord.

121.

C: I II₇ V₇ I₇ IV₇ VI IV₇ VII⁰₇ III₇ VI₇ II₇ V₇

The following rule will apply for progressions of this kind. When two or more chords of the seventh follow each other in the *fundamental position*, the fifth will be omitted in alternate chords.

Exercises.

122.

1. 3 $\frac{4}{3}$ 6 6 $\frac{6}{5}$ 7 7 7

2. 3 6 7 7 6 $\frac{6}{4}$ 2 6 7 7

3. 5 7 7 7 7 $\frac{4}{3}$ 6 6 6 2 6 7 7

4. 7 6 $\frac{6}{5}$ 7 7 7 6

5. 8 7 7 7 7 6 6

6. 3 7 7 6 6 7 7

7. 8 7 7 7 7 6 3 $\frac{4}{3}$



Application of the Secondary Chords of the Seventh in Minor.

The use of the secondary chords of the seventh in minor is not so general as those of the major scale. Many of them are either uncertain and ambiguous, or their resolutions produce harsh and unmelodious progressions of the voices.

With these last may be classed the chord of the seventh on the first degree of the minor scale, which if resolved like those given above, would produce a chord connection which is not conceivable.

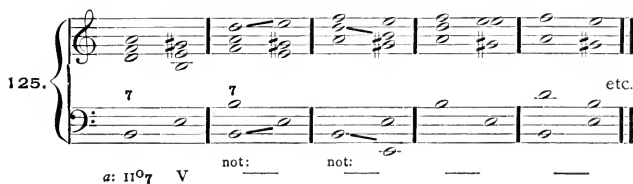


REMARK.—Even supposing progressions with the above combination of intervals can be formed like this :



still, it would hardly prove that it is really a progression of the chord of the seventh on the first degree in minor.

The natural resolution of the chord of the seventh on the *second* degree is to the *dominant*, and is much used.



A resolution of the chord of the seventh on the *third* degree is possible; it is, however, ambiguous, and belongs rather to C major than to a minor. (See Altered Chords.)

126.

a: III' 7 , VI' not: not: —

It should be observed that the *fifth* in this chord, as an *augmented interval*, will always *ascend* one degree.

The seventh chords on the fourth and sixth degrees are seldom used, as their resolution occasions harsh and unmelodious progressions.

127.

a: IV 7 VII 0 — — — — Good.

128.

a: VI 7 , II 0 — — — — Good.

The unnatural character of most of the above progressions is very apparent and prevents their general use.

The *seventh* degree carries a very important chord, generally known by the name of the **chord of the diminished seventh**. A resolution of this chord in the same manner as the others (to a fundamental a fourth above) is impossible, as it would lead to the triad on the third degree, which was shown above to be doubtful and ambiguous.

Instead of this, its resolution, as in the case of the chord of the seventh on the seventh degree in major, is based on the natural upward tendency of its fundamental, which is the leading tone of the scale :



Thus, while the fundamental of this chord rises, and the seventh falls one degree, the third and fifth are led as in other chords of the seventh, but the leading of the *third* must be carefully looked to, as in many positions (130, *a*) it may lead to faulty progressions :



whereas, in the position at *b* and *c* the third has more freedom.

REMARK.—The natural progression of this chord to the tonic, as well as of that on the seventh degree in major, led the older theorists to regard the dominant as the fundamental basis of the chord. They conceived it to be a chord of the dominant seventh with an added ninth—major or minor—and with the fundamental omitted, thus forming both chords of the seventh degree. In referring to what is said later (Chap. IX), of the chord of the ninth, we need only state here as a reason for the view offered that this assumption of the chord of the ninth is needless and far-fetched, and that simplicity, for practical purposes, is preferable to any complicated theoretical explanation.

In the application of the chord of the diminished seventh, observe the following :

The *diminished seventh*, the least harsh of all the secondary sevenths, *needs no preparation*.

Exercises.



The image displays six staves of musical exercises in bass clef, each containing a sequence of chords with figured bass notation. The exercises are numbered 3 through 8.

- Exercise 3:** Bass clef, C major. Chords: C (3), F (7), C (6), F (7), C (7 7 4 2), F (6), C (7), F (7 7).
- Exercise 4:** Bass clef, C major. Chords: C (4 2), F (6), C (7), F (7), C (7 7), F (6 5), C (6), F (6 7 4 2).
- Exercise 5:** Bass clef, C major. Chords: C (5), F (3), C (6 4), F (7), C (6), F (7 7), C (7), F (7 7).
- Exercise 6:** Bass clef, C major. Chords: C (6), F (3), C (7), F (7), C (6 4 3), F (5 7), C (6), F (7 7).
- Exercise 7:** Bass clef, C major. Chords: C (7), F (8), C (7), F (7 7), C (7), F (6 5), C (7).
- Exercise 8:** Bass clef, C major. Chords: C (8), F (3), C (6), F (7 X), C (7), F (6 4 2), C (5 X), F (7 X).

These and all former exercises in this chapter, the object of which was only to assist us in learning the mechanical use of the chords and to test the rules and remarks, have something hard and inflexible in their structure, since the great number of seventh chords here were only possible in their *fundamental positions*, and because the introduction of many of them, from our present standpoint, which did not allow us to select other means, was difficult and could only seem forced. The following may help to explain them:

The fundamental of these chords of the seventh move everywhere by *skips of a fourth or fifth*, as the bass parts show. Only, in the third exercise of Nos. 122 and 131, there seems to be an exception. In the fourth measure of the third exercise of No. 122 the bass tone remains stationary (on *a*), but the regular fundamental progression is maintained in the two chords according to rule: a_7, D_7 : The bass tone could be sustained here, as we have already learned how to use

the inversions of the chord of the dominant seventh. The case is the same in the third exercise of No. 131, where the fundamental progression is A_7-d , on the sustained A of the bass.

In the second example of No. 131, the chord of the seventh on the *third degree in minor* is introduced. It is strictly prepared, and on that account will not appear harsh or unnatural.

CHAPTER VII.

INVERSIONS OF THE SECONDARY CHORDS OF THE SEVENTH.

The inversions of the secondary chords of the seventh in major or minor give the same derived chords, as those of the dominant seventh, namely: the **chord of the sixth and fifth**, of the **sixth, fourth and third**, and of the **second**. The differences in the thirds, fifths and sevenths in the fundamental chords will require no alteration in the treatment of the inversions. Notwithstanding that the major seventh is changed by inversion into a minor second, and the diminished intervals into augmented, yet their progression takes place in the same manner already described.

132. 

No new rules are required for the resolution of these chords, only in the resolution of the inversions of the chord of the seventh on the seventh degree, care is necessary, as was said before, to avoid the *parallel fifths* which creep in so easily.

This may be added here :

Progression of the Chord of the Seventh Degree in Major.

133. 

All the above inversions are good. That of the chord of the *second*, however, is less used, as its resolution is to the chord of the sixth and fourth, which can seldom be used but as a *passing chord*. We should not be misled by the compact form of these chords in No. 133 as to their usefulness. The only important point, as mentioned before, is whether the seventh appears *above* or *below* the fundamental. Positions of the chords of the sixth and fifth and of the fourth and third, like the following :

134.

Figured bass notation for exercise 134: 6/5, 6, 4/3, 6, 6/5, 6.

are more satisfactory, because the seventh is heard *above* the fundamental. The chord of the diminished seventh requires a resolution similar to the above, *e. g.*

135.

Figured bass notation for exercise 135: *a:* VII[°]7 I, 6/5, 6, Or. 6/5, 6, 6/4, 3, 6, 4/2[#], 6/4.

The *third* inversion, the chord of the second, will here also be the least satisfactory, on account of its resolution into the chord of the sixth and fourth, a chord which requires most careful treatment. The parallel fifths which appear in the resolution of the chord of the sixth and fifth, and of the fourth and third, like those below, are considered faulty, as was said before, *e. g.*

136.

With this very pliable chord, the position of the fundamental in regard to the seventh, makes no such material difference as is the case with the chord of the seventh on the seventh degree in major.

Whether the seventh lies *above* or *below* the fundamental, the similarity of sound between the augmented second and the minor third always softens the chord, and causes the *former* to be felt as such only in respect of the key.

Exercises.

137.

1. 6 6 6/5 6/5 6 6/5

2. 3 6/5 4/3 7 4/3 2 6 7 7

3. 2 6/5 6 6/5 2 6 2 6 6/5

4. 5 6/5 2 6 7 4/3 6 6 6 6/5

5. 5 2 6 2 6 6 6/5 7 7

6. 3 2 6 2 6 6 4 2 6 6/5 7 7

7. 6/5 6 6 7 7 6/4 3 6 6/5

8. 3 2 7 6 7 6/4 3 6 7 6/5 2

9. $\overset{9}{\text{G}}$ $\overset{3}{\text{F\#}}$ $\overset{6}{\text{D}}$ $\overset{7}{\text{G}}$ $\overset{7}{\text{F\#}}$ $\overset{5}{\text{D}}$ $\overset{6}{\text{G}}$ $\overset{7}{\text{F\#}}$ $\overset{7}{\text{D}}$ $\overset{7}{\text{F\#}}$ $\overset{6}{\text{D}}$ $\overset{6}{\text{F\#}}$ $\overset{7}{\text{D}}$

10. $\overset{10}{\text{G}}$ $\overset{6}{\text{F\#}}$ $\overset{6}{\text{D}}$ $\overset{7}{\text{G}}$ $\overset{3}{\text{F\#}}$ $\overset{2}{\text{D}}$ $\overset{6}{\text{G}}$ $\overset{6}{\text{F\#}}$ $\overset{7}{\text{D}}$ $\overset{6}{\text{F\#}}$ $\overset{4}{\text{D}}$ $\overset{2}{\text{F\#}}$

CHAPTER VIII.

THE CONNECTION OF THE CHORDS OF THE SEVENTH WITH CHORDS OF OTHER DEGREES NOT YET USED.

The rule that the seventh must *descend* one degree, is, indeed, justified in the chord-connections previously shown, but it has as little *positive* authority as anything else which is subject to the necessary changes which occur in the great variety of chord-connections.

The progression of the *seventh*, or its inversion, the *second*, depends entirely on that of the *fundamental*. If this is in such a way that a *satisfactory and intelligible effect* is only possible through a *descent* of the seventh, then the above rule will hold good.

The progression of the fundamental may, however, be such that the seventh shall *remain stationary* or even *ascend*, *e. g.*

138. $\overset{6}{\text{G}}$ $\overset{4}{\text{F\#}}$ $\overset{3}{\text{D}}$ $\overset{7}{\text{D}}$ $\overset{6}{\text{F\#}}$ $\overset{4}{\text{D}}$ $\overset{3}{\text{F\#}}$ $\overset{7}{\text{D}}$

The above example shows the possibility of connecting the chords of the seventh with other chords than those hitherto employed.

A few known kinds of chord-connections will follow with remarks, that we may be able in forming new ones, to proceed in accordance with critical principles.

We begin with the *chord of the dominant seventh*.

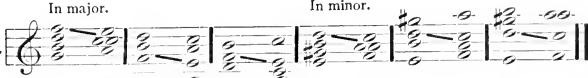
The resolution of the chords of the seventh according to previous rules was called **cadence**, and that of the chord of the dominant seventh the **closing cadence**.

When the chord of the dominant seventh is followed by a chord *other than the tonic triad*, the *natural tendency* to a close is either delayed or destroyed altogether. Thus, the feeling, or anticipation of the *natural* resolution experiences a disappointment; hence these unexpected resolutions are called **deceptive cadences** (false cadence).

Some methods of making these cadences follow :

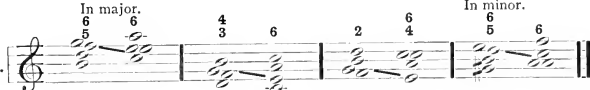
1. *The connection of the chord of the dominant seventh with triads other than the tonic, the seventh descending by a degree.*

a. Connection with the sixth degree.


139.  In major. In minor.
C: V₇ VI a: V₇ VI

This progression (deceptive cadence) is very often used.

The effect of the inversions of the chord of the seventh is less decided than in the fundamental position; they are therefore seldom used.

140.  In major. In minor.
C: V₇ VI a: V₇ VI

b. Connection with the third degree.

141.  Better position.
C: V₇ III

REMARK.—The inversions of the chord are omitted here. They can easily be made.

This progression becomes still more effective if a *modulation* towards *a* minor be introduced :

142.  C: V₇ a: V

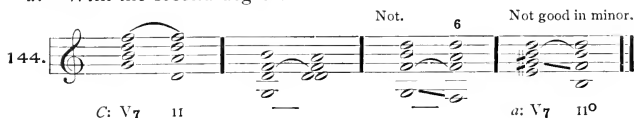
A connection with the triad on the *third* degree in minor can also be made. The latter chord, however, being also a dissonance, on account of its augmented fifth, will also require a resolution.

143. 

a: V7 III VI

2. Connection with triads, while the seventh remains stationary.

a. With the second degree.

144. 

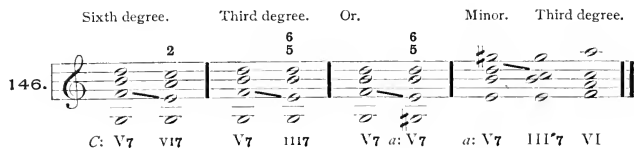
C: V7 II a: V7 II°

b. With the fourth degree.

145. 

C: V7 IV a: V7 IV

Connection of the chord of dominant seventh with *other chords of the seventh* besides those already used, is possible. A few here follow:

146. 

C: V7 vii7 a: V7 vii7


If modulations are introduced, many new connections of chords of the seventh become possible, *e. g.*

a. With seventh descending.

147. 

C: V7 d: V7 C: V7 b: vii7 a: V7 F: V7 a: V7 G: vii7

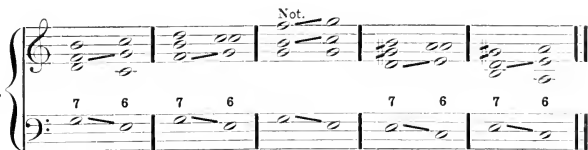
b. The seventh stationary.

148. 
 C: V7 E♭: V7 C: V7 B♭: V7 a: V7 C: V7 a: V7 G: V7

3. *Connection of the chords with the seventh ascending.*

This may occur in the regular cadence progression, V₇—I, II₇—V,
 or whenever the *fundamentals* progress by the usual cadence step.

a. By an exchange of voices in their progression.

149. 

When the *fundamental* of a seventh chord *skips downward a third*,
 the resolution of the seventh downward a degree is impossible on
 account of the faulty covered octaves which result, *e. g.*

150. 

This progression cannot be used in the other voices:

151. 

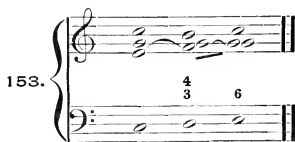
The above examples are all faulty.

b. The fundamental tone remaining stationary :

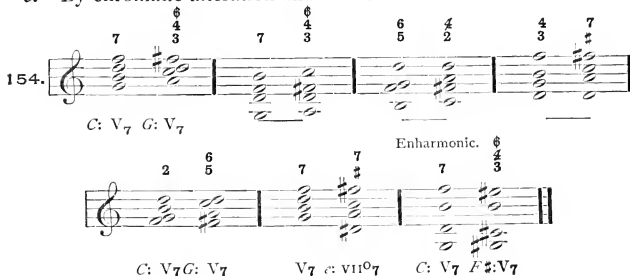
152. 

C: I V_7 I

In this case, the seventh must lie *at a distance* from the fundamental; the following progression is therefore faulty :

153. 

c. By chromatic alteration and modulation :

154. 

C: V_7 G: V_7

C: V_7 G: V_7 V_7 $c: VII^0_7$ C: V_7 F: V_7

d. By contrary motion of the bass and modulation into other keys :

155. 

C: V_7 d: V_7 C: V_7 $b: VII^0_7$ a: V_7 d: VII^0_7 C: V_7 F: V_7

The foregoing examples of chord-connections give only an intimation of the possible combinations. Their object was to draw attention to the great variety of harmonic progression, and its adaptability for composition.

Criticism only can decide as to the *value* of these and similar com-

binations, since their proper use is only possible by considering their *introduction, progression, rhythmical weight*, and, in fact, their whole situation.

The character of a piece, the movement of the voices with reference to a theme or an idea, or similiar causes, may lead to such harmonic combinations. To apply them at random, however, for the sake of appearing original, would so seldom succeed that the object would hardly be recognized.

Exercises.

156.

1. 3 7 6 6 5 8 7 6 7 7

2. 5 6 4 3 6 4 6 5 6 4 7 2 6 6 7

3. 3 2 6 4 3 6 4 7 2 6 5

4. 5 6 6 5 6 5 7 6 6 5 6 6 7 7

5. Open position. 4 3 6 6 7 6 6 5 6 4 7

6. 3 6 7 4 2 6 6 4 3 6 4 2 6 5 6 7 7

7. 6 7 4 2 6 6 6 6 5 6 4 3 6 6 6 4 2


8. 5 6 5 6 5 7 6 6 4 7

REMARK.—The open position in the 5th exercise above, has reference to a movement of the voices shown at Ex. 152.

Connection of the Secondary Chords of the Seventh with other Chords of Various Degrees or Keys.

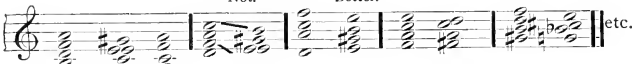
It would be impossible as well as unnecessary to give examples of all the connections of the secondary chords of the seventh with other chords. A few more connections of chords with secondary chords of the seventh may, however, follow here.

a. With regular progression of the seventh.

157. 

C: II₇ III II₇ c: V₇ C: III₇ IV III₇ F: V₇ C: IV₇ G: V₇

Not. Better.



a: II⁰₇ III* VI IV₇ V IV₇ V VI₇ G: V₇ a: VII⁰₇ d: VII⁰₇ etc.

b. With free progression of the seventh.

158. 

C: II₇ G: V₇ C: II₇ c: VII⁰₇ C: II₇ a: V₇ C: II₇ d: VII⁰₇

Not.

REMARK.—The reason why the last example is not good, lies in the so-called *cross relation*, an explanation of which follows later.

159. 

C: II₇ IV II₇ VI II₇ I II₇ I V

a. 7 b. 7 c. 7 6 d. 6/5 6/4

The last progression above is much used. The cadencing progression (II—V) is *delayed* by inserting the chord of the sixth and fourth of the tonic between them. The chord of the sixth also often appears between the seventh chord and its resolution, as in example c.

The *chord of the diminished seventh* is often resolved in the same manner:

160. 

The natural progression is here also only delayed by the use of the chord of the sixth and fourth.

The mechanical combination of such progressions of chords may be left to personal practice and examination. The advantages to be derived from it will be found in the insight which is gained of the relationship of chords, and therefore should not be too lightly esteemed. This practice will stand in about the same relation to composition itself, as technical studies and exercises do to the practical representation of musical works. Both produce readiness and skill, develop the powers, and make possible meritorious productions.

It may still be remarked in addition, that the relation of the seventh to the fundamental and its progression will always be regarded as the test of the above combinations. If this is pure and the other voices contain none of the faults before mentioned, the chord connection may be used for particular cases.

Exercises.

161.

1. 5 6 7 5 6 6 6 5 7 6 4 7

2. 3 7 6 5 6 7 5 2 6 7

3. 5 6 7 4 7 5 6 2 7 6 5 6 4 5 6 6

4. 5 6 5 4 7 7 7 6 6 6 7 6 4 7

The image shows four staves of musical exercises in bass clef. Each staff contains a sequence of notes with numerical figures (fingerings or intervals) written above them. The exercises are as follows:

- Staff 1:** Notes are G, A, B, C, D, E, F, G. Figures above are 5., 3, 6/5, 6/4, 7, 7/#, 6, 7, 6, 6/5, 6/4/#.
- Staff 2:** Notes are G, A, B, C, D, E, F, G. Figures above are 6., 3, #, 7/5/#, 6, 6/5, 6/4, 7, 7, 6, 6/4/#, 6/7.
- Staff 3:** Notes are G, A, B, C, D, E, F, G. Figures above are 7., 5, 6, 4/2/#, #, 2, 6, 7, 5, 6/4, 2, 7, 6, 8/7.
- Staff 4:** Notes are G, A, B, C, D, E, F, G. Figures above are 8., 7, 6, 6/5, 7, 4/2, 6, 4/3, 6/5, 6/4/#.

REMARK.—Many of the cases cited above were not included in these exercises, as they are based upon modulation, which is not fully explained until later. (The sixth exercise, second measure, has an application of modulation.) Many of the above exercises would have been smoother and more melodious by the application of modulation.

CHAPTER IX.

CHORDS OF THE NINTH, ELEVENTH AND THIRTEENTH.

Lengthy discussions respecting these chord-formations are found in most text-books.

The views which may be entertained respecting these chords are various, but they all tend to one practical result. It may be taken for granted that these are either real chords, such as the chord of the seventh, in which case they must be considered and treated as such, or else they belong to the list of suspensions, or occur accidentally when one or more parts remain stationary.

In the first case their explanation, and especially that of their inversions, would be extremely prolix, and moreover the chords themselves would often be difficult to recognize, inasmuch as in four-part

harmony one or more of their intervals must always be omitted. If, however, they are considered as suspensions or accidental chords, their explanation becomes very simple.

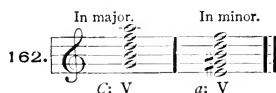
REMARK.—The chords of the ninth, eleventh, etc., are but a relic of the old systems of thorough-bass, so-called, in which every combination, no matter how transitory or accidental, was usually treated and taught as a fundamental harmony, the consequence of which was to render the study of the theory of music much more complicated and difficult.

While being unable here to go further into the theoretic reasons for classifying these formations as accidental ones, the possibility of simplifying the harmonic system without real practical disadvantage has determined us to take the latter view. (More upon this subject in Part II.)

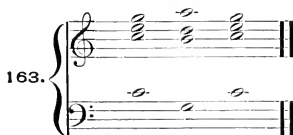
In order to obtain a clear insight into their nature, we will show the formation of these unessential chords, and add some remarks.

By adding to the chord of the dominant seventh another *third* distant a ninth above the fundamental, a chord is formed which is known as the **chord of the dominant ninth**.

In the major scale the ninth will be *major*, and in the minor scale *minor*:



In strict harmonic progression it is necessary that either the *ninth* or the *fundamental* should be prepared, as in the case of the dominant seventh. The following example, therefore, in which both fundamental and ninth enter *free*, is objectionable on account of the stiffness and lack of connection.



The preparation may take place as follows:

Better.

164.

In what respect the first examples are to be regarded as suspensions, and the last as accidental combinations, will be seen in Part II.

REMARK.—From the chord of the ninth in major they derive the chord of the seventh on the seventh degree, which has been already fully treated, also the chord of the diminished seventh from the chord of the ninth in minor, in order to be able to form their cadencing progression in a manner similar to the other chords of the seventh, asserting that these chords are themselves chords of the dominant seventh with the ninth added and the fundamental omitted, *e. g.*

165.

C: V₇ V₇ I c: V₇ V₇ I

In the first instance arises the difficulty, that we must accept two chords of the seventh degree in major—one, whose natural cadence is the following:

166.

and the other as derived from the chord of the dominant seventh. It seems that the clearest way is to refer to the leading tone upon which these chords are built.

Many theoretical works treat also of the formation of other chords of the ninth, called secondary chords of the ninth; this is, however, quite unnecessary, for inasmuch as they can never appear without preparation, their treatment, resolution, etc., will be in every respect similar to that of suspensions.

That which applies to chords of the ninth, will apply in a greater degree to chords of the eleventh and thirteenth, which are still less worthy to be regarded as real chords.

These formidable looking chords are as follows :



It is evident that they can never be employed in pure four-part writing, since the necessary omission of some of their intervals would completely alter their nature, and transform them into simple suspensions, thus :



And even in compositions with more than four voices, where they might appear in their complete form, their character and treatment will still be that of suspensions, while in the more free style, where they may also occur without preparation, they can be regarded as *changing or auxiliary notes*.

CHAPTER X.

CHROMATIC ALTERATION OF FUNDAMENTAL HARMONIES; ALTERED CHORDS.

The chromatic alteration of one or more intervals of a fundamental chord produces one of two different effects: it either causes a modulation into some new key, or, it gives an entirely new form and construction to the chord itself. If, for example, the major triad be chromatically altered in the following manner, there will arise :

a. Modulations.



Through $C\sharp$, the *diminished triad* of the seventh degree in D major or *d* minor, or of the second degree in *b* minor;

Through $E\flat$, the *c* minor triad;

Through $E\flat$ and $G\flat$, the *diminished triad* of the seventh degree of $D\sharp$ major or minor, or of the second degree of $b\flat$ minor.

The last two alterations are only *transpositions* of the same chord into *other keys*, namely, $C\flat$ major and $C\sharp$ major.

b. New forms.



Of these, the formations at *a*, *b*, *d*, *f*, can occur accidentally by the means of passing tones, but they have no harmonic value.

It is different with those at *c* and *e*, which have the character of real chords.

The first form of the triad (*c*) is known as the **augmented triad**. This chord was first found on the third degree of the minor scale. As before mentioned, it seldom appears in this connection, but more frequently as *triad* on the *first*, *fourth* and *fifth* degrees in major, with its fifth raised chromatically. It is easy of explanation, as the passing tone ($G\sharp$) to the following note (A) and its progression is indicated by this tone ($G\sharp$) as an augmented interval:



The inversions of this chord are also practicable:



Although these chords are generally used either as passing chords, or with the fifth prepared, yet in rapid changes of harmony they may also enter *free*, that is, without preparation:

173.

To the augmented triads on the first, fourth and fifth degrees may be added the sevenths belonging to those degrees. The chord of the dominant seventh is the one most used.

a. The augmented triad in connection with the dominant seventh.

174.

C: V₇ I

b. In connection with the seventh of the first degree :

175.

C: I₇, IV

c. The addition of the seventh to the augmented triad of the fourth degree is very seldom used.

176.

C: IV₇, VII⁰

In all the above examples the ordinary *cadencing* progression of the fundamental has been adopted. The following examples will serve to show that the chords of the seventh with the augmented fifth can also be used with other chords of various degrees and in different keys, and with different bass progressions.

177.

C: V7 III V7 a: V C: V7 d: vii° 1 C: V7 g: vii° 7 1

C: V7 e: V7 1 C: III I7. d: V C: III I7. G: V7

These harmonic combinations which occasionally sound so unusual and harsh acquire importance only through their connection with other chords, and especially if in a certain degree they are brought about through an *inner* necessity of the voice-leading.

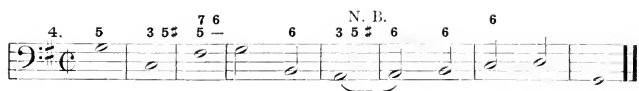
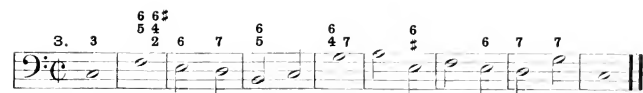
If it is the duty of a text-book to show the possibility of such harmonic combinations, it is also its duty to caution the student against employing them until he is thoroughly conversant with the simpler and more important forms of harmonic progression.

Exercises.

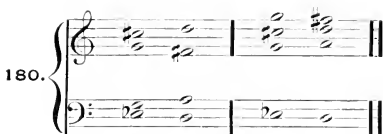
178.

1. 5 5# 5 5# 3 6 6 6 5

2. 3 2 6 5 6 5 5 5# 6 2 6 6 4 7



In the fourth exercise at N. B., the fifth of the minor triad on the second degree is augmented. The effect of this unusual combination is not unpleasant in its present position. From this it will be seen that the natural progression of parts will often lead to new combina-



The other positions of the original chord (the so-called double-diminished triad) are also available. The *second inversion* ($\frac{6}{4}$) can be used in four parts when the voices lie in a very open position. The *fundamental* position can be used in three parts, but seldom occurs.



REMARK.—The chromatic alteration of an interval of the minor triad is already shown in the formations at 169 and 170, and needs no further investigation. Also, the chromatic alteration of an interval of the diminished triad will result in either a major or minor triad, or formations already contained in the examples referred to above.

Thus, the form of the triad in No. 170, *a*, will be like the following which belongs to C major:



In many text-books this chord is termed the **harsh diminished triad**. Such chords appear only incidentally, *in passing*, and their progression is determined by their intervals—the *augmented ascending* a degree, the *diminished descending* a degree.

The *chromatic alteration* of an interval of the chord of the seventh, has already been noticed (page 103), where the chord of the seventh was found combined with the augmented triad. Of the other secondary chords of the seventh, that on the *second degree of the minor scale* is of especial importance among the altered chords which in the following form produces chords very much used.

By chromatically raising the *third*:



the following inversions are given:



Of these, the *second inversion* is most used; the others appear very rarely.

This chord in its second inversion is known as the **chord of the augmented sixth, fourth and third**.

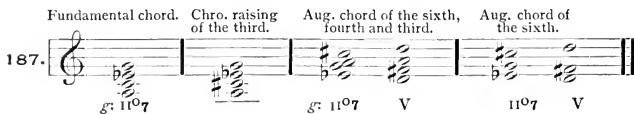
Its resolution is founded on that of the fundamental chord; thus, as the chord of the seventh on the second degree resolves naturally into the *dominant*, this will also be the case with the altered chord and its inversions:



If the fundamental be omitted in this chord, we have the *augmented sixth chord*, shown above, thus explaining the natural tendency of the chord to the dominant:



or compared with No. 179, in G minor:



REMARK.—It may be further remarked that the chord of the augmented sixth, fourth and third can also be formed by adding a seventh to the *harsh diminished triad*, mentioned on page 107. The resolution would be different, however, as *that* chord was found to rest on the *seventh* degree, while *this* rests on the *second*.

Instead of the fundamental, the *ninth* of the original chord can be added, whence is formed the **chord of the augmented sixth and fifth**. It is formed as follows:

Fundamental chord. With ninth. Without fundamental, with elevation of the third. Inversions.

a. $\frac{6}{5}$ b. $\frac{4}{3}$ c. 2^{\sharp}

188. 

a: Π^{07}

Of these chords, the *first inversion* (a) is the most practicable. The other inversions are seldom used.

Its natural resolution is again the same as that of the already mentioned nearly related chords, namely, to the dominant, but the *direct* resolution always causes *parallel fifths*.

189. 

These fifths, which are not among the most objectional ones, may be avoided in three ways; firstly, by an *anticipated resolution* of the fifth (the original, above-mentioned ninth as a supension), as in Ex. 190 at a; secondly, by a free progression of the fifth to the third of the same chord, as at b; and thirdly, by delaying the resolution of both third and fifth, whereby the chord of the sixth and fourth is introduced between the augmented chord of the sixth and fifth and its resolution, as at c. The latter method is the one most frequently used.

190. 

Not. Better. c.

NOTE.—The above three chords may be used in major as well as minor, as the dominant harmony, into which they all resolve, is the same in both.—ED.

REMARK.—The addition of a ninth is not sufficient to warrant us in classing this harmony as a chord of the ninth. The progression at *a* shows very clearly that the ninth has here, as elsewhere, the character of a suspension, and the same may be said of the progressions at *b* and *c*, which are treated precisely like suspensions, in so far as they require preparation. It would seem from this, that this harmony should have been treated in connection with the suspensions. As the question of origin was under investigation, however, it was proper to mention it here. It was not the intention, in expressing the above view, to oppose the customary method of *designating* this harmony.

Exercises.

191.

1. 3 2 5 6 6 ♯ 2 6 7 7 6 5 ♯

2. 6 6 4 3 2 6 7 6 5 4 3 6 4 ♯

3. 2 7 6 5 6 4 2 6 7 6 4 7

4. 3 2 5 4 3 6 4 3 6 5 3

5. 5 7 6 5 7 6 6 5 6 4 3 6 5 8 7

6. 5 6 7 5 6 6 5 7 6 5 7

7. 8 6 3 6 4 3 7 6 7 4 3 2 6 6 5

5. ϕ 2 6 7 5 5 ϕ 3 3 5 6 4 6 8 5 \sharp

8. 5 ϕ 6 7 6 7 5 6 ϕ 5 \flat

5 7 6 7 ϕ 4 3 \flat 2 7 8 7 6 5

9. 3 6 ϕ ϕ 4 3 6 5 \sharp 7 7 6 4 ϕ 4 5 3 \sharp 6 7 5 \sharp

10. 3 6 5 6 7 7 5 5 \sharp 7 3 \sharp 6 5 \sharp

ϕ 6 7 \flat 6 4 3 ϕ 6 4 3 7

NOTE.—It is much simpler to explain the chord of the *augmented sixth and fifth*, when it occurs in minor, as a seventh chord on the *fourth degree* (subdominant) of the scale, with an altered (raised) *fundamental*. This obviates the inconvenience of being obliged to recognize “so-called” chords in *practice* while ignoring them in *theory*. It is easier for the pupil to remember that the chord $\frac{6}{3}$ is referred to the *second degree*, and the chord $\frac{6}{5}$ to the *fourth degree*, than to be obliged to study out *which* chord it is that *has been*, or *would be* a chord of the ninth had it not met with an accident in losing its *fundamental*. The following makes this much discussed subject clearer, and also shows that the subdominant, as usual, presses naturally towards the dominant.

Original. Altered. Inverted. Resolution delayed.

a: IV7 IV7 I V

See Ex. 190, at c.

The above altered chord can also be taken as standing on the second degree of the major scale (as above in C), and the resolution made to a chord of the sixth on the tonic, thus:



The student is urged to become perfectly familiar with these altered chords, as they are of the greatest importance in the art of modulating. The ease with which they can be formed *from* dominant seventh, or *into* dominant seventh chords makes them very valuable aids in rapid changes of key. It is only necessary to make an *enharmonic change* of one note; thus:



At the close of this chapter, we review once more the broad field which it has opened for harmonic formations. We have found much that was generally known and useful, and much appeared which was worthless or unfit for use. Nothing appeared, however, in its original state; everything had undergone some change, an addition, or to an extent an embellishment. This forsaking of the *original form* gives occasion to refer again to what was said on page 104.

While it was a long time before these harmonic transformations were discovered, it was yet longer before they were brought to practical use. Much that has heretofore seemed unfit for use may yet, with time, be perfected; but it is unadvisable to direct the whole effort to the discovery of new harmonic formations and their unwholesome use, merely from a desire for originality, lest we lose sight of the more important *fundamental principles* which contain the healthy germ of art.

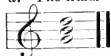
All these transformations should serve more for embellishment in carrying out the fundamental idea, and unless sparing use be made of them, our work will appear overloaded and ourselves be regarded as devoid of taste.

At the close of the presentation of all the essential harmonies and their immediate use, we append a table giving their *varieties* and *derivations*.

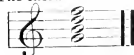
View of all the Chords belonging to a Major or Minor Key.

I. FUNDAMENTAL HARMONIES.

a. The triad.



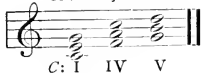
b. The chord of the seventh.



A. THE VARIETIES OF THE TRIAD: MAJOR, MINOR, DIMINISHED, AUGMENTED.

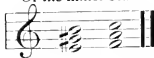
Major Triads.

Of the major scale.



C: I IV V

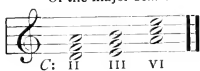
Of the minor scale.



a: V VI

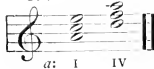
Minor Triads.

Of the major scale.



C: II III VI

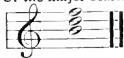
Of the minor scale.



a: I IV

Diminished Triads.

Of the major scale.



C: VII°

Of the minor scale.



a: II° VII°

Augmented Triad of the Minor Scale.

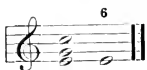


a: III#

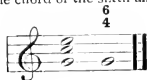
N. B. For other augmented triads see under II.: *Altered Chords*.

Inversions of the Triads.

a. The chord of the sixth.



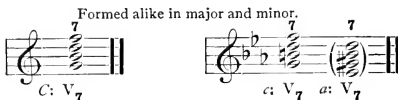
b. The chord of the sixth and fourth.



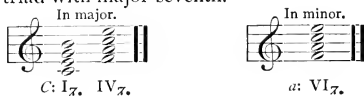
B. THE VARIETIES OF THE CHORD OF THE SEVENTH.

a. The chord of the dominant or primary seventh.

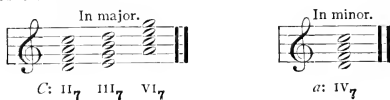
b. Secondary chords of the seventh.

a. *Chord of the dominant seventh (major triad with minor seventh.)*b. *Secondary chords of the seventh.*

1. Major triad with major seventh.



2. Minor triad with minor seventh.



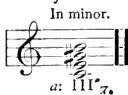
3. Diminished triad with minor seventh.



4. Diminished triad with diminished seventh (chord of the diminished seventh.)



5. Augmented triad with major seventh.

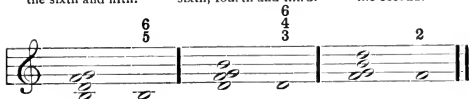


Inversions of the chords of the seventh.

a. The chord of the sixth and fifth.

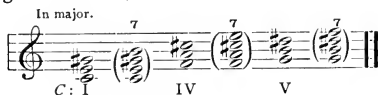
b. The chord of the sixth, fourth and third.

c. The chord of the second.



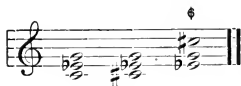
II. ALTERED (CHROMATICALLY CHANGED) CHORDS.

a. The augmented triad, formed from the major triad.



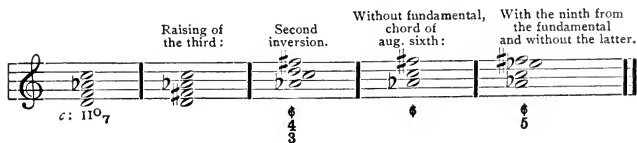
b. The chord of the augmented sixth, formed

1. From the minor triad with raised fundamental (so-called double diminished triad) :

2. From the chord of the seventh of the second degree in minor.
(See the following chords.)

c. The chord of the augmented sixth, fourth and third.

d. The chord of the augmented sixth and fifth, — both formed from the chord of the seventh of the second degree in minor :



CHAPTER XI.

ON MODULATION.

The term **modulation** formerly signified the manner in which harmonies were arranged to a given part or melody. By it is now un-

derstood the digression, or passing, from one key into another. The meaning of the term having been decided, it will next be necessary to learn to properly recognize and define each occurring modulation or digression into a foreign key. In a later chapter, the *means* by which modulations are effected will be more fully set forth.

A **modulation** takes place whenever a chord appears which is foreign to the *previous* key. The original key is then entirely abandoned and all succeeding chords must be considered as belonging to the new key until another foreign chord is introduced, when a new modulation will naturally arise.

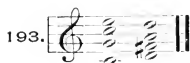
192.

The musical notation shows a sequence of chords in a grand staff (treble and bass clefs). The chords are represented by vertical lines with dots for notes. Below the bass staff, the chords are labeled with figured bass notation: C: (first measure), d: (second measure), C: or G. (third measure), G. (fourth measure), and a: (fifth measure). Above the bass staff, the figures 6, 7b, 6, 7, and 7 are placed under the respective measures.

Thus, in the above example, a chord appears in the third measure which cannot belong to the key of C, but which is easily recognized as the chord of the diminished seventh, on the seventh degree of *d* minor. In the fourth measure we find the triad of C, which now cannot be in the key of *d* minor, but it is doubtful whether it belongs to C major or to G major, as the chord may belong to either of those keys. [It is most likely that in this case it belongs to G major, as this modulation is decided by the *next* chord.] The concluding modulation to *a* minor in the fifth measure is evident enough.

The *chord of the dominant seventh*, and also the *chord of the diminished seventh* are the most decisive means for modulating. All other chords are ambiguous, as they may belong to several keys. Thus, the triad of G major does not belong to the key of G alone, but is also the dominant of C major and *c* minor, the subdominant of D major, and triad on the sixth degree of *b* minor. Owing to this ambiguity, it will often be necessary to consider the situation in which a chord appears—that is, what precedes and follows it—before deciding its place in a key. A *decided* modulation can only be effected through the chord of the dominant seventh or its inversions. A musical ear will, of itself, easily grasp a modulation. It will always

take the foreign harmony as being the one which is nearest related to the present key. Thus, for example, in



the major triad of D taken by itself, would belong to the key of D major, but in connection with C major, the ear at once recognizes it as the dominant of G major, and the following chords will only decide the permanent key. The following exercises are for practice in ascertaining the course of modulation. The markings under the bass should be strictly followed in all cases as shown in the first exercise.

Exercises.

194.

2.

3.

4.

5.

6. 3 6 4 3 6 8 7

7. 3 4/3 4/3b 4b/2 6b/4 6/5 6/4 6/5 6/5 6

8. 5 6/5 6/5b 6/4 7 3 2 6

6 6b/4 6/5 6 6 7

9. 8 7b 7/5 6 4/3b 4/2 6 4b/2 6/5b 6b/4

6/5 6/5 6/4 3 2 7 6/4 7 10. 8 6 6/5 3/3 6

6/5 6 7/5 3/3 7 6/5 6/4 6 7/2 6 7 6/4 3

11. 3 6 6 6/5 2 6/5 6/5

6b/4 6b/4 3 6 4/2 6/4 6 6/4 7

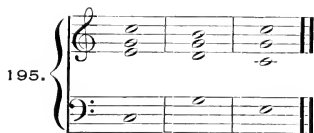
PART II.

ACCIDENTAL CHORD-FORMATIONS.—TONES
FOREIGN TO THE HARMONY.

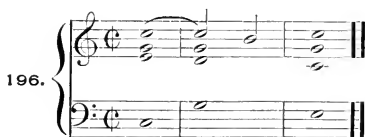
CHAPTER XII.

SUSPENSIONS.

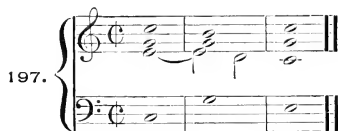
The simultaneous progression of all the parts of a chord, especially when, as in the foregoing examples, there is no variety of rhythm, occasions a certain monotony and sameness. Sometimes, however, instead of all the parts proceeding at the same time from one chord to the next following, one or more will remain stationary, while the remainder proceed to their respective positions in the succeeding chord. The most important of this class of progressions is termed the **suspension**. A suspension occurs when a certain expected or even necessary progression is *delayed* in such a manner that a voice which should descend one degree in order to take up its position in the succeeding chord remains stationary, while the other parts proceed independently of it. The delayed or *suspended* voice proceeds to occupy its proper position later in the measure. Thus, in the following example—



the *soprano* may remain on C, while the other voices take the chord of G in the second measure; the suspended part being then resolved into the note B in the second half of the measure:



In the same manner a suspension can be formed from Ex. No. 195 by delaying the tenor:



The principal feature of the suspension, is that it generally forms a dissonance with the chord in which it appears, and acts as a means for the closer connection of harmonies through the expected resolution of the dissonance. That the *dissonant* character of the suspension does not always exist is shown in Ex. 197, where the suspension is not dissonant with any interval of the chord, but only a chord of the sixth over the bass note G. In this case the unusual appearance of the minor triad on the third degree, between the triads of the first and fifth degrees, as well as its peculiar position, together with the delayed progression of the tenor, all combine to give the phrase the character of the suspension. The necessary rules for forming suspensions are given in the above examples:

A suspension may be formed by delaying the progression of *any* voice which would naturally descend one degree, provided the tone which forms the suspension be prepared. The suspension in its complete form may therefore be considered under three heads, namely, the *preparation*, the *suspension itself* and its position, and its *resolution*, or progression.

a. The **preparation**.

The *preparation* of a suspension is precisely like that of any other dissonance, and may be effected by means of any one of the intervals of a triad, and also, though more rarely, by means of a seventh, generally the dominant seventh.

Preparation through the octave of the fundamental: Through the third:

198.

C: I V I I a: VIIo7 I C: I II VI

Through the fifth:

C: I G: V VI C: I IV I I c: VII^b7 I

Through the dominant seventh.

C: V⁷ I V V⁷ a: V IV

The preparation must take place on the unaccented part of the measure (arsis); the suspension enters on the accented part (thesis). The note of preparation must be *at least* as long as the suspension itself, in conformity with the rule previously given for the preparation of dissonances.

b. The **suspension**.

The entrance of the suspension on the thesis has been mentioned, but its position in other respects must be more minutely explained.

The suspension may appear in any voice and before any interval of the triad,—before the seventh very seldom.

Suspensions before the octave of the fundamental.

199.

C: V⁷ I II I V⁷ I V⁷ I

Before the third.

C: IV I I V I V7 IV I

Before the fifth seldom, only in certain positions.

C: I V F: I V7 C: I V

The remarks on Ex. 197, will apply to all suspensions before the fifth. Thus, in the above example the progressions at *a* and *c* will have the entire character and effect of suspensions, while that at *d* will not. If a seventh be added to the chord into which the suspension is resolved, as at *b* in the above example, the dissonance of the suspension is at once perceived; also at *e*. The reason why the seventh can seldom be suspended, is that the suspension would in most cases form a perfect octave, and as such would not have that dissonant character which is essential to a suspension. If, however, the octave be diminished instead of perfect, a suspension of the seventh is possible, as at *b* in the following example:

200.

a. b.

8 7^b 8^b 7^b

The progression at *a* in the above example is called a **passing seventh**.

c. The resolution.

The *resolution* of the suspension, as before remarked, takes place by the same voice descending one degree.

REMARK.—Different ways of making resolutions will be treated later.

It should here be observed, that the *tone of resolution* (the tone which has been delayed) must not appear in any other voice except the bass.

201.

In example *a*, the tenor moves from A to C, the C being also the resolution note of the soprano; in example *c*, the tenor takes the note G which is already suspended in the alto. Both of these cases are faulty, especially because the *third* and *fifth* of the chord are doubled. The effect of doubling the *fundamental*, as in example *d*, at N. B., is better, particularly when the natural flow of the voices require it, as in the following passage:

202.

REMARK.—It may be here observed, that when the fundamental is doubled it should always be at a distance of at least an *octave* from the suspended note, and that doubling in the *unison* is to be avoided, *e. g.*



Between bass and tenor, however, such a progression as the above may be possible.

Other intervals besides the fundamental may, however, be doubled in the *bass*. That voice being the one which determines the chord, has the power of resisting the dissonance of the suspension, and such doublings are therefore admissible if the interval so doubled be introduced by a good leading of the voices, *e. g.*

Faulty.

203.

The fault contained in the last example becomes plain if the suspension be omitted, when *open octaves* will be found between soprano and bass :

204.

It is the same with fifth progressions which are covered by the suspension :

205.

These remarks may be condensed into the following rule :

The suspension does not remove parallel octaves and fifths.
Hence, the following is faulty.

206.

Nevertheless, *parallel fifths*, covered by suspensions, are not to be unconditionally forbidden. Their employment is rare, however, and must depend on the leading of the other parts being such that the unpleasant effect of open fifths is not perceived. It is impossible to give positive directions regarding them, and to reject them totally would be going too far.

The suspension in the bass, which usually occurs before the third of the chord, or, which is the same thing, before the chord of the sixth, or the sixth and fifth, does not allow the *suspended note* to appear in any other part.

207.

The suspensions before the fundamental, and the fifth, are seldom used in the bass. See Ex. 199, at the end.

208.

The method of figuring the suspension has already been partly shown in the foregoing examples. When the suspension lies in one of the three upper parts, the interval found between the suspension and the bass is indicated, together with its resolution.

For example: $\frac{5}{4} \frac{9}{6} \frac{8}{-} \frac{7}{6}$. Where necessary, other figures are added to indicate the chord into which the suspension is resolved, *e. g.*, the chord of the sixth $\frac{9}{6} \frac{8}{-}$, the chord of the sixth and fourth $\frac{6}{5} \frac{8}{4}$ or $\frac{7}{6} \frac{6}{4}$.

If the suspension lies in the bass, or lower voice, the *accidental* intervals of the upper voices are indicated by figures, *e. g.*, $\frac{5}{-}$, or if it be a chord of the seventh $\frac{5}{4} \frac{-}{2}$, the dashes signifying that the voices remain stationary during the resolution of the suspension.

The suspension in the bass is also indicated by an oblique line over the suspended note, and the proper figuring over the note of resolution; for example :

209.

In the following exercises the former manner is adopted, as the most usual.

NOTE.—As the suspension is not considered a real harmony, it will be necessary when adding the Roman numerals under the bass, to make them apply to the *fundamental* of the *resolution*, which is the real chord. An examination of No. 211 will show how these exercises are to be worked out. It should also be observed, when the figure 7 is followed by a 6 over the same bass note, that it does not imply a chord of the seventh, but a chord of the sixth with the sixth suspended by the seventh. See No. 211, third measure.—ED.

Exercises.

210.

The image displays five staves of musical exercises, each in bass clef. The notation includes notes, rests, and figured bass (numerical figures) indicating fingerings and intervals. The exercises are as follows:

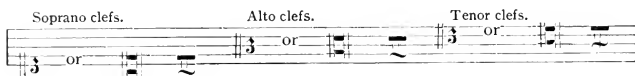
- Staff 1:** Bass clef, 3/4 time. Notes: G2, A2, B2, C3, D3, E3, F3, G3. Figures: 5., 5, 6 5, 9 8, 7 6 5 4 3, 6 5 4, 7 6 5, 5 4 3 5.
- Staff 2:** Bass clef, 3/2 time. Notes: G2, A2, B2, C3, D3, E3, F3, G3. Figures: 6., 5, 6, 7 6 5 4 3 2, 7, 7 6 5 9 8 7, 6 5, 6, 6 5 4 4 3 2.
- Staff 3:** Bass clef, 3/4 time. Notes: G2, A2, B2, C3, D3, E3, F3, G3. Figures: 7., 8, 6, 5 4 3 2, 6, 5 4 3 2, 4 3 2, 5 4 3 2, 6 5 4 3 5.
- Staff 4:** Bass clef, 3/2 time. Notes: G2, A2, B2, C3, D3, E3, F3, G3. Figures: 8., 3, 6, 9 8 7, 6 5, 6, 2, 6, 6, 6 4, 6 5 3 7.
- Staff 5:** Bass clef, 2/4 time. Notes: G2, A2, B2, C3, D3, E3, F3, G3. Figures: 7 6 5, 7 6 5 4 3 2, 6, 5 4 3 6, 7 6 5 6 5 4 7.

In working out the above exercises it will be advisable to write each voice on a separate line or staff, both in order to obtain a clearer view of the progression of each part, and also as a useful preparatory exercise in reading from score. Inasmuch as the four different parts are always considered as *vocal* parts, it will also be better to write each part in the clef which properly belongs to it, instead of the violin clef as heretofore. Familiarity with these clefs is necessary in the study of counterpoint, and they are easily learned by practice and comparison with those already known.

REMARK. — A knowledge of the alto and tenor clefs is indispensable for the reading and understanding of scores, as many voices and instruments have their parts written entirely or partially in them.

The clef proper to be used by the soprano, alto and tenor, is called the **C clef**. For the lowest voice, the bass, the **F**, or bass clef is still used.

The position of the **C** clef always indicates the *once marked* (middle) **C**, and for the soprano this **C** is placed on the *first*, for the alto on the *third*, and for the tenor on the *fourth line*, *c. g.*



The ordinary compass of the voices in these clefs, as well as the relative position of the same notes, is clearly shown in the following example :

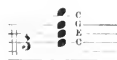


Probably the best method of fixing these clefs in the memory, is to carefully observe the position of the **C** triad, written for the different voices; then the neighboring tones are easily found. Thus the position of the **C** triad, with the fundamental doubled, will be :

In the soprano :



In the alto :



In the tenor, best in the position of the chord of the sixth and fourth :



The first exercise of No. 210 worked out in these clefs follows here :

211.

SOPRANO.

ALTO.

TENOR.

BASS.

C: I G: V F: IV G⁷: V⁷ C: I d⁷: 11⁷ G⁷: V⁷ C: I

The working out of these exercises will require a somewhat free treatment of the voices with respect to their leading, since in order to obtain a good position for the suspensions it will often be necessary to lead the voices by skips, thereby bringing the chord into *open* position, which may again be exchanged for *close* position, through the natural progression of the voices. In thus altering the position of the voices, the following rules must be observed :

It is not permissible for all the voices to change their proper positions *at once*, when passing from *one chord to another*, or in passing from close to open position, or *vice versa*, except in certain cases where *one and the same chord* is changed to another position. Any voice may change its position, if one or more voices *remain stationary*.

The eighth exercise of No. 210, worked out as follows, will show the application of the above rule :

tal harmony. It is evident, however, that when employed as above, it is only to be explained as a suspension (or retardation) of the leading tone.

Of other suspensions, especially those progressing a *whole-step* upward:



some show in themselves their unnatural progression; while others, however often they may find place in practice, in theory must be condemned as unfit for use in pure part-writing. Should these irregular suspensions be carried out in the manner shown in No. 213, the faulty progressions upon which they are based would show themselves:



Suspensions in Two or More Voices.

Suspensions may appear in *two or more* voices at the same time:



The chord of the sixth and fourth often appears as a double suspension, *e. g.*



Freer Movement of the Voices in Resolving Suspensions.

Hitherto, only two chords have been employed for the preparation, entrance, and resolution of the suspension, since the voices not par-

icipating in it remained stationary during the resolution. The progression of the voices will, however, become richer and more varied if *three* chords are introduced.

This is effected by allowing one of the voices, generally the bass, or even several at the same time, to proceed to a new harmony at the same moment that the suspension is resolved. The note into which the suspension resolves will always form one of the intervals of such new harmony.

For example :

By progression of the bass :

220.

C: V7 I — II7 V I I IV II7 I a: VII⁰7 I

By progression of several voices :

221.

C: I II V7 VI I IV VII⁰ VI I V7 a: V7 I

In all these examples the resolution of the suspension follows regularly while the other voices progress to a new harmony of which the resolution tone forms a part.

REMARK.—In illustration of the views advanced in Chapter IX, on the subject of chords of the ninth, it may here be observed, that many cases in which the ninth occurs, and which would be recognized and treated by many theorists as *chords of the ninth*, may be much more simply explained by considering them as *suspensions of a ninth with the use of three chords*, thus :

222.

Suspension of a ninth with two chords. With three chords. Better.

Of the ninth which enters free, more will be said when treating organ-point.

It may still be urged as an argument against independent chords of the ninth, the impossibility of bringing them into such inversion *with the fundamental* that the latter is brought into close proximity with the ninth, as may always be done in the case of chords of the seventh, *e. g.*



In like manner *four* chords may be employed for the preparation and resolution of a suspension, provided the tone of resolution is not contained in any other voice, *e. g.*

224.

Without suspension.

C: I IV II VII° VI

Exercises.

225.

Between the suspension and its resolution, other tones may be inserted in the same voice.

These may be tones which belong to the chord, *e. g.*

226.

or tones foreign to the harmony, changing notes, *e. g.*

227.


The explanation of these and similar cases will be more complete when describing passing and changing notes. Cases are to be met with in which the suspension has no resolution whatever, *e. g.*

Usually thus :

228. 

Such passages are formed by the omission of one or more notes of the following, or some similar, phrase :

Or.

229. 

Anticipation.

The **anticipation** of a tone, which is the opposite of a suspension, and is less frequently used, occurs when one or more voices proceed to their places in the following chord *before* the others, or before the rhythm would lead us to expect them, thus giving rise to temporary discords.

Progressions of this sort seldom occur in slow movements or with long notes, on account of the harsh effect of the dissonances which they occasion. It is only the shorter divisions of the measure that are anticipated, *e. g.*

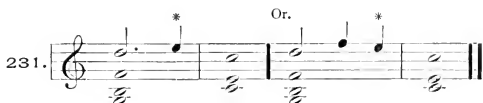
Anticipation in the bass. In the soprano. In several voices.

230. 



The similarity of the above to what is known as *syncopation* is unmistakable, but the latter is formed not by *anticipating* the chords, but by *striking after*.

The movement of the voices may, under some circumstances, be more free. The note which forms the anticipation need not always be exactly the one which is expected on the appearance of the second chord. A different note, if it belongs to the harmony of the second chord, may also be introduced as an anticipation, as in the familiar cadence :



Another kind of rhythmic variety, the reverse of anticipation, occurs when one voice does not proceed to its place in a chord until *after* all the other voices have taken up their respective positions. Such progressions resemble suspensions, inasmuch as both preparation and resolution take place, but differ from them in the important particular, that they are formed by rhythmic rather than harmonic variations, and can only appear in sequences, whereas suspensions, whether singly or in greater numbers, appear under entirely different conditions.

The following bass presents a series of such after-struck tones :



The unison passage in Beethoven's "Leonore" overture (No. 3) would be classed under this head :

233.

The musical score is for a piano accompaniment of a unison passage. It is written in G major (one sharp) and 3/4 time. The first system shows a treble and bass staff with a unison melody. The second system includes a 'cres.' marking and continues the unison melody. The third system ends with 'etc.' and a double bar line.

CHAPTER XIII.

ORGAN-POINT : SUSTAINED TONES.

By sustaining one or more voices, and by the chords thus accidentally formed, a peculiar variety of harmonies are produced. We frequently find, usually in the bass, a long sustained tone over which the other voices progress, apparently without any reference to it. When this tone lies in the bass, it is called **organ-point**, or **pedal-point**. When occurring in the other voices, they are called **sustained tones**, or **stationary voices**. The tones adapted for these sustained voices are the *tonic* and *dominant*; they are also used *together*.

REMARK.— Attempts which have been made, by many composers, with the third of the triad, sound unnatural and far fetched.

The harmonic connection and progression of the remaining voices during the continuance of the organ-point, is still carried out according to the rules already known, the lowest of them being treated as the harmonic foundation, and usually without regard to the sustained tone.

Before entering into details regarding the treatment of the organ-point some examples may follow :

a. Organ-point upon the tonic.

234.

b. Upon the dominant.

c. Or,

d. Upon both together.

In the above examples the chords to which the organ-point does not belong harmonically are marked with a cross.

The following remarks may serve for the treatment of the organ-point:

1. The *entrance* of the organ-point must be at a *rhythmically definite time*;
2. By means of a chord to which the organ-point *harmonically belongs*;
3. The last chord of the organ-point must also *harmonize with it*.

The first takes place at the *beginning or end* of a period, or a section of one, and upon the *accent*; the second and third generally through the fundamental of a triad, as in Ex. 234 *a, c, d*, or, as at *b*, through the chord of the sixth and fourth.

It must be borne in mind, that chords *foreign* to the bass tone should not follow each other too frequently, but alternate with those which belong harmonically to the organ-point. This is necessary in order to avoid digressions contrary to the character of the organ-point, which is to hold firmly together the various chord-connections.

Thus, the following organ-point would be faulty in this respect:

235.

The voice lying next above the bass, in a four-part phrase, the tenor, becomes, in case of the organ-point, the basis for the harmonic leading. Hence, all the necessary harmonic progressions must rest upon this voice, even though the organ-point should accidentally belong to the harmony. Thus, in Ex. 234, *a*, the progression of the B \natural in the alto (in the first measure) is determined by the leading of the other voices, and not because it is the seventh from the bass.

When the organ-point rests upon the dominant, as often happens

at the close, no plagal close can be formed over it, as appears from the third rule cited above, *e. g.*

236. 

The plagal close may, however, be used with the organ-point on the tonic :

237. 

The end of the organ-point must be treated just as carefully as its entrance. In the above examples this takes place through a cadence, where it presents no difficulty, except in cases like No. 236. The organ-point may, however, pass earlier into the harmonic movement, when the third rule must be strictly observed, *e. g.*

238. 

To break off in the following manner would not be good :

239. 

Stationary Voices: Sustained Tones.

Sustained or stationary voices in the upper parts are less frequent than the organ-point, and require more careful treatment. Sustained tones of this sort only suit the character of these voices when the chords not belonging to them appear but seldom, as these voices have not the power to counterbalance the effect of the foreign chords, which is a peculiarity of the bass as the voice which determines the harmony.

Thus, the organ-point in Ex. 234, *a*, if placed *above* the other voices, will not sound well in the last measures :



but the following with the dominant as the sustained tone, is better, because the last chords belong to it :



The “Gloria” of Cherubini’s Mass in C-major, contains an example of the effective treatment of the sustained tones, where an $A\flat$ in the violins is held for some time while the chorus and the other instruments carry out their respective parts below ; also the D of the violins in the introduction of Mendelssohn’s overture “Calm Sea and Happy Voyage.” In either example few chords are found which do not contain the sustained tone as one of the intervals. The Trio of the Scherzo of Beethoven’s Symphony in A, contains an A which appears as stationary tone in the upper and middle voices, and also as organ-point below, and which serves as harmonic basis throughout the movement.

Stationary tones in the middle voices require as careful management as those in the upper voice. In instrumental works they may be

doubled according to circumstances; they rarely occur in four-part writing, and not at too great a length, *e. g.*

242.

REMARK.—In addition to what has been said of the chords of the ninth, the following may still find place :

In the above Ex. *b.* if the stationary tone be included, a complete chord of the ninth is found, inverted, and with a regular resolution. The objection to chords of the ninth, as already stated, is, that they cannot be inverted so that the fundamental and ninth can be brought into close proximity, as is the case with sevenths. That they may occur together at a greater distance, as above, is no reason for regarding them as independent chords, as they only occur in connection with a stationary tone, the character of which is to carry harmonies foreign to it, as for instance, in the case of the following ninth, which surely forms no chord of the ninth.

243.

When the harmonic progression above the organ-point is to be indicated by figures, the intervals above the stationary tone must be given, thus changing sometimes the usual figuring of the chords. The organ-point in No. 234, *b.* might be marked thus :

244.

On account of the difficulty of reading, as well as its lack of completeness, this method of marking is only used in special cases. In scores where figuring is used, the words “tasto solo” is often found, which indicates that the organ-point only is to be played.

CHAPTER XIV.

PASSING NOTES: CHANGING NOTES.

Among tones foreign to the harmony are especially to be included **passing** and **changing** notes.

Passing notes result from inserting tones between the greater or smaller intervals of the harmony.

245.

The notes marked * are the *passing notes*, those marked o are *harmonic by-tones*, that is, in so far as we take the first note as belonging to the triad of C, or a, e. g.

246.

The passing notes under a, Ex. 245, are called *diatonic*, those under b, *chromatic*.

Passing notes lead from one harmonic note to another, and cannot, therefore, appear on the entrance of a chord but after it, upon smaller parts of the measure, and progress only by *degrees*.

Changing notes are those tones foreign to the harmony which appear, like the *suspension* or *appoggiatura*, at the entrance of the harmony (in this sense on the accented part of the measure), and join themselves to the harmonic note (No. 247, a), or, like passing notes on the unaccented part of the measure, serve as a melodic embellishment of *two notes of like pitch*. (247, b.)

247.



Changing notes above the harmonic note, whether they enter by skips, or as in No. 250, may form either major or minor seconds to the chord note because they occur diatonically, and are therefore governed by the key and modulation.



Changing notes, one after the other, above and below the chord note, are often used, *e. g.*



This is the origin of the following much used embellishment :



Passing and changing notes may occur in any of the voices. If, by preference, this takes place in but *one* voice, this one will assume a more prominent character, while the others will serve as an accompaniment; or, if desired, all the voices can be made to participate alternately and thereby gain in importance. As a general rule, whenever the position and progression of a voice will admit of it, the application of these help-tones will give it greater melodic importance, but here again there must be a limit, as too much development in all the voices *at once* will produce confusion and lack of clearness.

The following simple movement,





by the use of these help-tones, might be written thus :



The passing and changing notes are here marked by crosses. How easily such a passage may be made to suffer from the addition of so many tones foreign to the harmony, may be seen if the above example be played in a somewhat rapid tempo. This style of writing is better adapted to slow movements.

The same rule that applies to suspensions holds good here—the harmony note following a changing note *must not appear in any other voice, e. g.*



This can only take place when the parts are distant from each other at least an octave, *e. g.*



In accordance with the principles of doubling, the fundamental or fifth is better for the purpose than the third of the chord.

In quick movements and with more lengthy application of figures formed by changing notes, other questions will arise, as will be seen from the following passage, which, however, cannot be taken as a four-voiced vocal phrase :



As to the regular passing notes, the same rule is to be observed regarding their proximity to harmonic tones, and figures like No. 259, *a*, *b*, are not so pure as *c*, *d*, *e*.



Here, also, more rapid figures make this proximity more tolerable, *c*, *g*.



Faulty Progressions through Connection with Passing and Changing Notes.

As passing notes are used to fill up the intervals where skips are made in the harmonic progression, care must be taken when the harmony changes, that no false progressions arise through covered fifths being changed to *open* fifths by the leading of the passing notes :



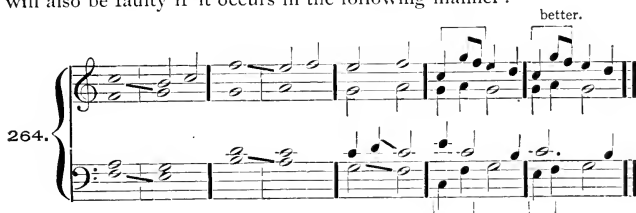
Open octaves, formed by passing tones, may not occur, because the first of them will be harmonic as well as the second.



In the following cases, however, the passing notes will not cover the open octaves, and are therefore faulty:



The entrance or progression of the *changing note* in parallel motion will also be faulty if it occurs in the following manner:



The last example is better, because the octave progression is covered.

Passing and Changing Notes in more than one Voice at Once.

Parallel movements of thirds and sixths are most effective for passing notes in several voices at the same time, *e. g.*



The free movement of the voices with the use of passing notes may also give rise to parallel seconds, fourths, fifths, and sevenths, of all kinds, and require great care in their treatment, and on account of their harshness are only to be admitted singly and in very favorable positions. Progressions of fourths are allowed when another voice is added a third below :



Single fifth-progressions, caused by passing notes, are sometimes found in good compositions, but that is no reason why they should be regarded as faultless. In the same way the harshness of seventh-successions can only be modified by a favorable position, a good progression of the voices, and through tempo, movement, etc.

In *contrary motion*, the various intervals of the passing notes often give the passage a peculiar coloring, and add materially to the independence of the voices, but they should not appear too plentifully or in too many voices at once.



Here also it will be seen, that those passing notes which, in connection with others lying beyond the simple harmonic structure, form a new (passing) harmonic leading, are smoother and more natural than those whose formation cannot be explained harmonically. The value of such movements can only be arrived at by taking into consideration their character and tempo.

In regular harmonic progressions, several voices may receive passing tones simultaneously, *e. g.*



In all such passages, the main point is whether, at the *change of the harmony*, the voices shall be in a position to admit of their forming a *regular progression*. *Changing notes* can occur in different voices.

a. In *two voices*:

In parallel motion.



In contrary motion.



b. In *three voices*.



c. In *four voices*.



REMARK.—Most of the above examples may be taken as harmonic progressions over an organ-point.

It is plain from these examples, that in the parallel movement of two voices in changing notes, the progressions in thirds and sixths are the most natural, while parallel seconds, fourths, fifths and sevenths always produce a very harsh effect. Thus, no one would be apt to call changing notes like the following, good:



Changing notes may also be of greater duration than the harmonic note which follows them, *e. g.*



The importance in composition of the subjects explained in Chapters XII, XIII, and XIV, is sufficiently great to warrant a careful investigation of them, as a thorough knowledge of them will assist materially in understanding the inner harmonic structure. It still remains to speak of their relation to the pure harmonic structure, the object of our next studies.

Since the term "pure harmonic structure" has only been spoken of generally, it will be necessary to examine the question more closely and to present it somewhat in this manner:

What application does our exercises in pure part-writing allow us to make of these materials for composition?

It is undeniable that these materials are particularly adapted for the development and embellishment of the voices.

If, however, our immediate task be to recognize and work out *simple harmonic formations*, then everything which is adapted to *developing* the voices may be used; but whatever serves for embellishment only, must be rejected; in short, the essential must be distinguished from the unessential.

First, as unessential, must always be classed:

All unnatural and unusual harmonies in general, where they are not founded upon an inner necessity.

They may easily cause overloading and confusion in a passage, and give evidence of a disordered or weak mental condition rather than strong, original work; next,

Irregular introduction of suspensions; the use of sustained voices, and anticipated and delayed, or after-struck tones; and especially

The changing notes which enter free, and the figures formed from them, in short, whatever is not appropriate to a good, plain four-voiced song.

Vocal composition being generally regarded as the *basis* upon which all music is founded, much will have to be excluded which properly belongs to instrumental works. If the use of chorals or

movements in that style is suggested for practice in learning a good and pure leading of the voices, yet, even this will not exclude the use of those materials when they serve not only for ornament, but for developing the leading of the voices.

Especially to be reckoned among these, is the use of suspensions and the regular passing and changing notes.

From the foregoing, it may now be understood that much which was forbidden as immaterial and not to the purpose in connection with the first study of the pure harmonic structure, may still be readily used in practice, whenever favorable opportunities present themselves.

A complete understanding of the subjects so far discussed will be greatly facilitated by studying good compositions. We shall return to this subject in Chapter XIX, when opportunity will be afforded for attempts of our own.

CHAPTER XV.

PASSING CHORDS.

Passing chords are those which appear in the weaker parts of the measure, like passing notes in several parts, and which sometimes deviate from the general rules of chord-connection. One variety has appeared already in those passing and changing notes in three voices, which assume the form of a chord, *e. g.* in Nos. 271 and 272. So that in one sense, the chords formed over an organ-point may be called passing chords. There are, however, still other phenomena of the sort which must be explained.

As passing and changing notes generally depend upon rhythmical conditions, it becomes necessary for the explanation of passing chords, to glance at the different divisions of the measure.

It is known that in simple *even kinds of time*, the accent naturally falls upon the first part of the measure, while the second part receives less weight.

Now, if the harmonic progression be based upon the two divisions of the measure, the harmonies which fall upon the accented part will

always be regarded as the more weighty and important, and as the point to which the chords of the second part will lead :



In this sense, the chords on the second half of the measure may be called passing chords, although the regularity of the movement somewhat obscures their character.

That this has been so understood in theory, if not plainly expressed, is shown by the fact that much more care has always been given to chords which appeared on the accent, and much allowed to those on the unaccented part which was not permitted to those on the accent.

The character of passing chords, however, appears more clearly with such harmonies as appear on the smaller division of the measure, as in the following examples:

276.

277.

The peculiar appearance of the chord of the sixth and fourth in Ex. 276, *a* and *c*, and also of the chord of the seventh at *c*, is only to be explained as a movement of all the voices by degrees, in the manner of passing notes, to the nearest chord—that on the accent of the next measure.

These voices may be still more easily identified in their character as passing if one voice remains stationary, for example, the bass of No. 277, *a*, or the upper voices, at *b*.

The leading of the voices in No. 276, *a*, arose from applying both modes.

If this condition (the progression of the voices by degrees) be fulfilled, all the chords can enter free, and find their explanation in the chord which next succeeds them.

278.

REMARK.—The free (upward) leading of the seventh, before mentioned, is here justified in this explanation of the passing chords.

In the simple *uneven* measure, the accent will also fall upon the first part of the measure, while there will be *two* divisions of less weight. Passing chords will appear thus :

279.

Smaller divisions of the measure can also contain passing chords, but after the above no further explanation is necessary. Here, also, the study of good compositions will be advantageous. The following remarks may still apply for personal attempts :

All chords denominated as passing, will either progress in accordance with the known rules for harmonic progression, or deviate from them. In the first case, which is the more frequent, nothing further need be said ; in the latter, it will depend upon a flowing, melodious movement of the voices, individually, as well as in relation with each other, whether formations of this kind are to be considered correct.

It can only be observed generally, that here also *the movement of the voices by degrees will determine the character of the passing chords*, and that all such passages must be judged with reference to the rhythm, tempo and character of the piece.

CHAPTER XVI.

THE MEANS FOR MODULATION.

The term **modulation** has already been explained in Chapter XI. The object there was to designate each modulation correctly. We have now to treat of the best means of effecting modulations.

The art of modulation consists in finding those chords which are related to two or more keys, in order by their aid to pass from one key to another.

Modulations can be effected in many ways, and serve various purposes.

Firstly, they may appear abruptly, and the new key may pass away quickly ; or

Secondly, they may be more gradually prepared, in which case the new key will serve for some time as the foundation for the harmonies employed.

In the first case the modulation will be introduced by the simplest and quickest means, and although it may be distinct and unmistakable, the new key will soon be abandoned and a fresh modulation introduced. In the second case the modulation will generally be *gradually* prepared by various means, and the new key will remain long enough to become familiar to the ear, and may even lead to a cadence or perfect close. Thus, in the following example, the modulations are transitory, and the key changes rapidly without wandering far from the original key of C major :

280.

C: F: V7 G: V7 a: V7 C: I

This kind of modulation is only suitable for the more nearly related keys.

In the next example the more distant key of $E\flat$ is gradually approached, and when it is reached the original key is entirely abandoned. It will be seen how the transitory modulations are employed as means of introducing the final modulation into $E\flat$, which is the object of the phrase :

281.

$C: I \quad b\flat: viiio7 \quad B\flat: I \quad f: V7 \quad E\flat: V7$

Unless these short passages are employed as interludes between two compositions in different keys, or as exercises, they must be made use of in a prescribed manner, since upon this formation of modulation rests also that of the periods and their divisions. This, however, is an important part of the doctrine of form, and is foreign to our present purpose.

We take at present the formation of such modulations as exercises, in order to develop skill in the use of harmonies and their proper connection.

In considering the means by which modulations are effected, it will not be necessary to distinguish between the above two methods, since the same will serve for both kinds.

The first and most simple means of modulation will be the **tonic triad of the new key** itself. If this triad is identical with one of the chords of the original key, it will only require the dominant harmony of the new key to make the modulation complete. Thus, in the following example at *a*, no modulation will be perceived, while at *b*, the key of G major is only recognized when the third chord is heard :

282.

In the case of remote keys, the tonic *minor triad* is certainly more decided, but even this chord requires the dominant harmony of the new

key to render the modulation unmistakable (at *a*). The *major triad* of the new key, when not followed by its own dominant harmony, has in itself somewhat the effect of a dominant chord (*b*).

283.

Part *a* shows a modulation from C major to F major. The chords are: C: I, f: I, V7, I, C: I, III, V7. The bass line has figures 6/5, 6/5, and 6/5.

Part *b* shows a modulation from C major to A minor. The chords are: I, C: I, a: V, I, C: I, e: V, I. The bass line has figures 6, 6, and 6.

As the *tonic* triad used as above for modulation shows itself to be weak and unsatisfactory, it is seldom used in its fundamental position, but its second inversion, *the chord of the sixth and fourth*, has the property of rendering the modulation particularly decided. In this case also, the tonic triad is followed by the dominant, which completes the modulation, and at the same time forms the closing cadence.

284.

The chords are: C: I, G: I, V, I, C: a: I, V7, I, C: a: V, I. The bass line has figures 6/4, 6/4, 6/4, 6/4, 6/4, 6/4, 6/4, 6/4.

If this chord be employed on the unaccented part of the measure, the modulation will not be so decided:

285.


The chords are: C: I, G: I, V, I, C: a: I, V7, I, C: a: V, I. The bass line has figures 6/4, 6/4, 6/4, 6/4, 6/4, 6/4, 6/4, 6/4.

A still more effectual means of modulation is the *dominant triad*, and especially the *chord of the dominant seventh*, which renders the new key clear and unmistakable.

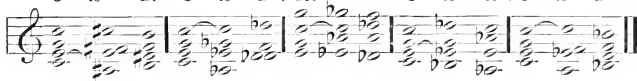
According to the principle that the connection of chords, one with another, is best effected by means of tones belonging to two successive chords, and remaining in the same voice, modulations may be formed through the chord of the dominant seventh from the chord of the tonic of the original key to any other key, excepting those of the minor and major thirds and the augmented fourth.

Thus, from the key of C major into all keys (whether major or minor is immaterial at present) except E \flat , E, and F \sharp , modulations may be formed as follows, the connection being in each case observed by means of tones which remain stationary, and indicated by ties.

From C to d; C to F; C to G; C to a;


286. 

C to B; C to D \flat ; Or: C to A \flat ; C to B \flat :



It is obvious that these modulations may be made in various positions of the same harmonies, *e. g.*

C to d. Or.

287. 

In order to modulate into the remaining three keys (E \flat , E, F \sharp) another chord will be required, usually a triad, which will supply the needed connection, *e. g.*

From C to E \flat ; C to E; C to F \sharp .

288. 

Similar modulations may be formed from the minor, as follows.

289. From *a* to *b*; *a* to *d*; *a* to *e*;

a to *F*; *a* to *G*; *a* to *B*?

Into the remaining keys C, D \flat , E \flat , F \sharp and A \flat through a connecting chord:

290. From *a* to C; *a* to D \flat ;

a to E \flat ; *a* to F \sharp ; *a* to A \flat ;

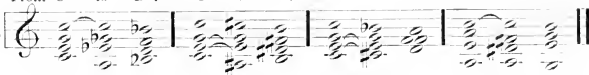
It is of course understood that the above examples merely show the *simplest principle* of modulation, and that it is not necessary that modulations should always be carried out in this way. Nor is the above mentioned connection of chords always requisite, as will be seen by the following example:

291. From C to E \flat ; C to *e*; *a* to C;

The student is here recommended to write out modulations from, and to, all keys, major and minor, through the chord of the new tonic, or the dominant seventh, and in doing so to employ all the various positions of the chords, and to play them on the pianoforte when written, in order to become well acquainted with their effect.


Another equally important chord with the chord of the dominant seventh, is the **chord of the diminished seventh**, which is often more peculiarly suited for purposes of modulation than the former, especially in those cases in which the seventh and fundamental of the dominant harmony would be obliged to enter without preparation. The following examples will show the application of this chord to modulation:

From C to B \flat : C to B: C to d: a to e:

292. 

Beside this simple and natural use of the chord, especial advantage in modulation may be taken of its *enharmonic* nature.


The following chord, being written with different notation, will belong to *four* different keys, although the sound will in each case be the same.

293. 

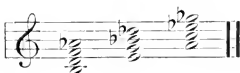
In the first of the above cases, the chord belongs to *f* minor, in the second to *d* minor, in the third to *b* minor, and in the fourth of *a* \flat minor.

Thus, by means of one chord, four modulations are possible:

From C to f: C to d: C to b: C to a \flat :

294. 

Now, since all the chords of the diminished seventh can appear in the following three positions,

295. 

and each of them, through enharmonic change, may belong to four keys, modulations are possible for all *twelve* keys in minor, and in many cases to the twelve in major, as this chord can often be substituted for the chord of the dominant seventh in major.

A similar capability of enharmonic change is possessed, though not to so great an extent, by the **chord of the augmented sixth and fifth**.

The resemblance which the sound of this chord bears to that of the dominant seventh,



permits the one chord to be substituted for the other, and thus certain modulations may be effected, *e. g.*

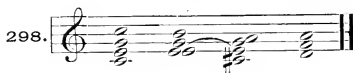
297.

C: V7 b: II^o7 I V I Eb: V7 d: II^o7 I V I

So far we have been considering the means of modulating *quickly* from one key to another. Since, however, it is not always an object to modulate as quickly as possible, the following will be a useful exercise:

To modulate from one key into the other, by means of the triads of the different degrees of the original key.

From C to *d* through the triad of the third degree:



From C to *d* through the triad

Of the fourth degree. Of the fifth degree.

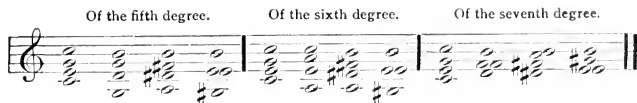
299.

Of the sixth degree. Of the seventh degree.

From C major to E through the triad

Of the second degree. Of the fourth degree.

300.



The above examples will be sufficient to indicate the manner in which other modulations may be formed according to the same principles.

Extension of the Modulation and its Completion by means of the Cadence.

The process shown above, for passing from one key into another, was founded upon the simplest and most natural means. If we wish to form a longer and more gradual modulation than any that have hitherto been met with, the same means will be employed, but not in so direct a manner. That is to say, instead of proceeding to the new key by the shortest and most direct means, *transitory* modulations will be used, and the new key be introduced by degrees, and when reached, will be, as it were, fixed and rendered distinct by means of the cadence. For this practice we can form for ourselves exercises of the following kind:

Modulate from C major through *d* minor, *a* minor and G major to *e* minor. This could be done something like this:

301.

C: I *d*: vii°₇ *a*: vii°₇ G: V₇ *e*: V₇

When adding the cadence, the following should be noted:

If the final modulation be effected through the chord of the sixth and fourth of the tonic triad of the new key (see Ex. 284), then it will only require to be followed by the dominant chord to complete the cadence, *e. g.*

302.

In other cases the *extended* or *prepared cadence* must be added to the modulation in order to confirm the key. The simplest forms of the extended cadence are I—V—I, the first of the three chords being usually in the form of a chord of the sixth and fourth, and II—V—I, the chord on the second degree generally appearing as a chord of the sixth or sixth and fifth, *e. g.*

a. In other positions.

303.

6 6 7 6 6 7

4 4 4 4 4 4

I V I

b.

6 6 7 6 6 7

4 4 4 4 4 4

117 V I

In other positions.

6 6 7 6 6 7

5 5 5 5 5 5

117 V I

The *position* of the chords forming the cadence will depend upon that of the *last* chord of the modulation to which they are added. This is shown in connection with some former examples. The modulation from C to E \flat (No. 288), closes with the fifth in the soprano. To this is added the cadence in the position which will connect naturally with this last chord, *e. g.*

From C to E \flat . Cadence.

304.

b 6 \flat 5 \flat 5 \flat 6 6 4 \flat 7 \flat

4 4 4 4 4 4

The following modulation from C to *a* in No. 286, would require a cadence in this position.

305. *From C to a.* *Cadence.*

The modulation from C to B with the cadence under No. 303 *b*:

306. *From C to B.* *Cadence.*

307. *Or from C to D♭.* *Cadence.*

We conclude with an example on a more extended plan:

From G through e minor, C major, and b♭ minor to A♭ major. Cadence.

308.

The above will give an idea of how we can form for ourselves a great variety of exercises.

PART III.

THE PRACTICAL APPLICATION OF HARMONIES— EXERCISES FOR THEIR USE IN THE PURE HARMONIC STRUCTURE.

The following hints regarding the most practicable application of harmonies, will serve still further to explain, elaborate, and make more complete the principles thus far developed. Individual cases will give occasion for further remarks.

CHAPTER XVII.

THE SIMPLE HARMONIC ACCOMPANIMENT TO A GIVEN VOICE.

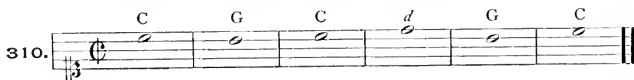
In treating of the harmonic accompaniment to a given voice, we have to consider the *simple melodic progression* of each part, and all other elements of a melody, such as metrical and rhythmical variations, will remain for the present out of the question.

1. *Harmonic accompaniment of a soprano.*

The following simple *exercise* is selected :



The letters used before to indicate the fundamental tones which are to serve as the harmonic basis, will be added above :



In every harmonic progression, the *leading of the bass* is of the first importance.

We direct our attention, therefore, to this first, which according to the fundamentals indicated may be as follows:

311.

SOPRANO.

BASS.

or thus:

312.

The addition of the middle voices will not now be difficult:

313.

SOPRANO.

ALTO.

TENOR.

BASS.

The above will serve, for the present, as an explanation of the exercises themselves.

In order more clearly to explain the principles of a good progression both of the bass and middle voices, we shall make use of examples incorrectly worked out.

314.

REMARK.—For the sake of saving space, we shall use the violin clef in the following examples, and write the voices together on two staves. The pupil is advised, however, for personal work to practice the method used in No. 313.

This exercise may be worked out thus :

315.

C F G7 C *d* G7 C

6/4 7 6/4 6 7

The above example contains no violation of any of the rules of progression or chord-connection hitherto shown, nevertheless, it is meager on account of the stiffness, weakness, and insecurity of the bass.

In a good progression of the bass (except in case of an organ-point), *no tone must remain stationary* unless it is required to do so in order to serve as the preparation of some dissonance, or unless it is equalized and counterbalanced by a very decided movement in all the other voices.

The above example also contains, in two places, a faulty use of the *chord of the sixth and fourth*, which will afford an opportunity to speak of the employment of this peculiar and difficult chord.

Of the Use of the Chord of the Sixth and Fourth.

The chord of the sixth and fourth (second inversion of the triad) is far less frequently met with than either the fundamental position or the first inversion of the chord. The reason of this is that its proper use depends upon certain conditions. We have already seen how it is used in the formation of the cadence, and also in connection with modulation, where its effect is somewhat similar. In both these cases it may enter without preparation, but always on the accented part of the measure (thesis).

Apart from these uses of the chord, it produces the best effect when placed on a bass which either remains stationary or moves by degrees. In this case it should be an inversion of either the tonic, dominant, or subdominant, and its *fourth* should be prepared.

case (at *a*) still more decidedly on account of its appearing with the chord on the third degree, which occurs so rarely :

319.

6 4 3 2 6 5 6 4 6 5

When all the parts proceed by degrees, and the notes are of short duration, the chord of the sixth and fourth may enter without preparation :

320.

6 4 7 6 6 4 —

This will require no further explanation after what was said in Chapter XV., regarding passing chords, and after the examples 276 and 279.

REMARK.—The fact that a preparation of the perfect fourth in the chord of the sixth and fourth is often necessary has led many theorists to consider the interval a dissonance. In the introduction to this work it was classed among the consonances, and the grounds for this view were stated. The necessity for preparation is only felt when the fourth occurs between an upper part and the bass, and even then only in the chord of the sixth and fourth, for the chord of the sixth, fourth and third may often appear without preparation. Occurring between two upper parts the fourth is as free in its treatment as any other consonance, while this is never the case with a dissonance, which always preserves its character whatever its position.

The chord of the sixth and fourth derived from the diminished triad is seldom used in four-part harmony on account of its incompleteness.

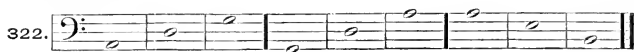
321.

6 4 6

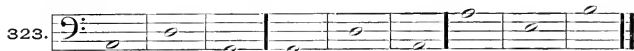
In the three-part phrase, however, it may be used, and frequently supplies the place of the chord of the second. (See later, the three voiced movement.)

A correct and pure harmonic progression not only requires that the bass shall form a clear and intelligible harmonic foundation to the phrase, but also that each voice shall proceed according to certain melodic rules.

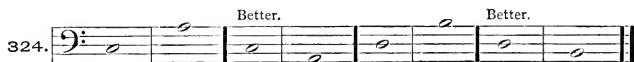
Certain progressions have always been considered unmelodious—among them two consecutive skips of a fourth or a fifth in the same direction, *e. g.*



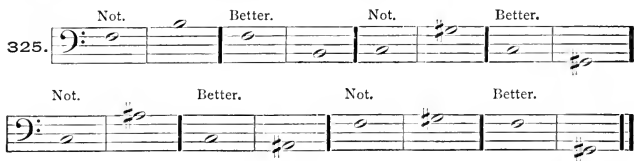
The above are improved thus :



Even skips of a sixth are better avoided, and the progression altered to that of a third in the contrary direction, if the compass of the voices admit of them :



Progressions of *augmented intervals* are to be avoided as *unmelodious*; diminished, however, are allowable.



The skip of a major seventh is always to be avoided, that of the minor seventh only in case of an inversion of the same chord, but not when the harmony changes.



The last, in something like the following progression of harmony :

327.

These few remarks will be found to contain the principles of a good melodic progression, and will suffice for the present simple exercises. It must be observed that the above rules of melody do not refer to the movement of the bass alone, but apply in general to that of all the voices.

Exercise No. 314, with an improved progression of the bass, may be written as follows :

328 a.

Exercises.

328 b.

1. C G C — F C G C

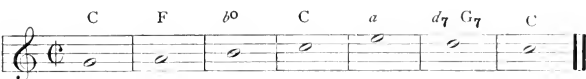
2. C — F

3. G C d₇ G₇ C C G a d G₇ C d₇

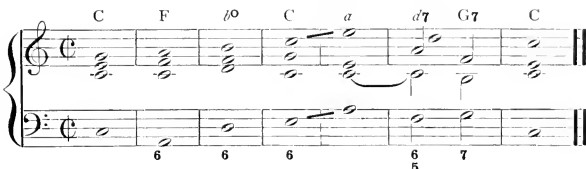
4. G₇ C C — G₇ C d₇ G a d₇ G₇ C

The next example will afford an opportunity for the explanation of an important and difficult part of harmonic connection and voice leading.

Exercise.

329. 

To illustrate, we take the following faulty working:

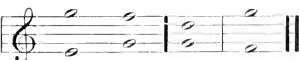
330. 

The faults in the above example are three in number; firstly, in doubling the third of the chord in the second measure without reason, thereby leading this and the following harmony into an awkward position; secondly, the progression of covered fifths between bass and soprano in the fourth and fifth measures; and lastly, the entrance of the seventh by a skip, in the last measure but one.

With regard to this last error, it has already been stated, that the dominant seventh may only enter free when the fundamental is already present in the preceding chord and remains in the same voice; moreover, if preparation is possible, as is the case in Ex. 330, it should always be observed.

331. 

The free entrance of both fundamental and seventh is less harsh in *contrary motion*:

332. 

in *parallel motion*, however, it is always to be avoided, or only to be used in very favorable progressions, like that, perhaps, in the first example of No. 333, where the fundamental (G) is already present, but in another voice.



The first of the above mentioned faults will be corrected later. The second and most important fault in Ex. 330, will give an opportunity of considering more fully the progression of **covered fifths and octaves**.

Covered fifths and octaves occur, *when two voices, starting from some other interval, progress in parallel motion to an octave or fifth. e. g.*



These fifths and octaves become visible if the skip made by one or both of the voices be filled up by the intermediate notes, as indicated above.

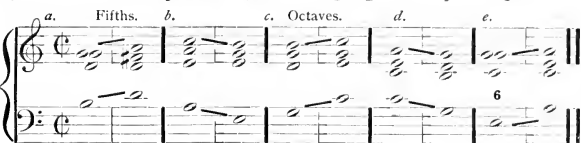
Although certain covered fifths and octaves should be avoided, yet if such progressions were entirely excluded from the four-part phrase, the choice of chords would become extremely limited, and the progression of the voices very much restricted. We shall therefore proceed to make some observations on the employment of these progressions, although positive rules which would apply to all cases cannot be given.

Covered fifths and octaves may be caused by various kinds of progressions; for example: one voice may proceed from any one degree to the next above or below it, while the other voice skips a greater or less distance (in which case the skips may be either in the upper or lower voice); or again, *both* voices may proceed by skips.

In either case the covered progressions may occur between the outer voices, between the middle voices, or between an outer and a middle voice.

Covered Fifths and Octaves in the Outer Voices.

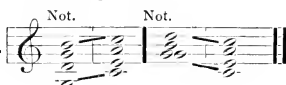
They are admissible *if the upper voice progresses by a step.*

335. 


At the same time, it will be advisable that one of the voices be led in contrary motion or remain stationary, as at *a*, *b*, *c*. Example *d*, where all the voices move in parallel motion, is not so good.

REMARK.—Although the above rule will suffice in many cases, yet it will not always apply, as may be seen at *e* in the above example, which cannot be called a good leading of the voices, as the progression from the chord of the sixth is a very forced one. We may repeat what has been said before, that the progression of covered octaves in which the upper part moves by a half-step are more tolerable than those which pass over a whole-step.

In the examples shown above, it will be observed that the progression is always towards the fundamental of the chord. All those cases where the progression is toward the *third* should be avoided, or used with great caution. For example :

336. 

Even toward the *fifth* of the chord it cannot be called good.

337. 

REMARK.—In case of the covered fifth, the lower voice will always be the fundamental of the chord.

Covered fifths between the outer voices are to be avoided when the upper voice skips.

338. 

Whenever the connection is made closer by means of a seventh, as at *b*, *d*, *e*, in the above example, the progression of fifths appears more covered and less harsh.

Covered octaves between the outer voices are not unconditionally prohibited when the upper voice skips.

339.

Here also the progressions will be best in which the bass moves by a half-step only, as at *a*. The remarks made on Nos. 336 and 337 will apply to *d* and *e*.

Covered fifths and octaves between the outer voices are to be rejected when both voices skip.

340.

Such progressions are not faulty, however, *when they only form inversions of the same chord*, because in that case they do not *progress to other chords* which are *fundamentally* different.

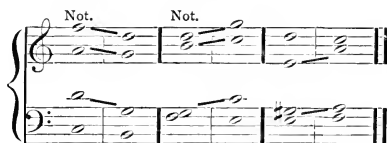
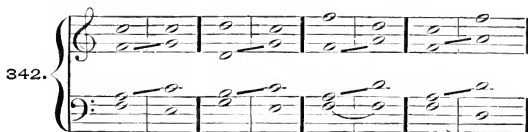
341.

Covered Fifths and Octaves in the Middle Voices.

Although the progression of the middle voices ought to be as pure as that of the outer voices, yet on account of their position, being as it were covered by the outer voices, they may be allowed a greater

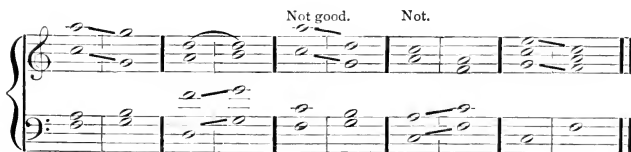
freedom of movement, especially with regard to covered fifths. Hidden octaves between the middle parts are seldom good, on account of the voices becoming too widely separated; and with respect to covered fifths, their good or bad effect will depend on the good connection of the chords in other respects, and also upon their agreement with the rules relating to covered fifths between the outer voices.

A few cases are here given :



Covered Fifths and Octaves between the Outer and Middle Voices.

Here also the conditions under which such progressions may be used cannot be determined by merely mechanical rules, but must depend on a good natural connection of the harmony. The following are a few examples :



One peculiar kind of covered octave has still to be mentioned, namely, that which passes *over the seventh*.

This progression is faulty in all the voices.



(See Ex. 149 and what follows.)

All that has been said of covered octaves applies also to *covered unisons*. These are forbidden between soprano, alto, and tenor, but may occur between tenor and bass, where they are to be treated as covered octaves—according to the position of the chord and of the voices themselves.

The cases in which covered fifths and octaves may appear are so numerous, that it would be impossible, even if it were not useless, to cite them all. The above remarks may be sufficient, if we add the following maxim, which, however, is not for those beginners who are still engaged with the technical, or purely mechanical harmonic structure, without regard to the higher requirements of art :

Avoid, indeed, covered fifths and octaves whenever possible ; but regard them as permissible, where, on the one hand, an otherwise natural, good connection of harmony is obtained, or on the other, reasons of a higher order prevail, such as melodious movement of the voices, employment of given motives, etc.

After this digression, we return to No. 330, in order to correct the faults it contains.

The covered fifth found there, which belongs to that class where both voices skip, can scarcely be remedied, since if we lead the bass in contrary motion, the same fault will appear in another place, though it will be less perceptible on account of its occurring between a middle and an outer voice instead of between the outer voices, *e. g.*



In such a case, therefore, we have no choice but to alter the harmony itself, and select a different marking of the fundamental tones, thus :

346.

Or thus :

347 a.

Exercises.

347 b. 1.

2.

3.

4.

The following exercise :

348. 

G C G D7 G C G a D7 G

we will work out thus :

349. 

1. 2. 3. 4. 5. 6 6 8 7

The faults of the above have been numbered for reference.

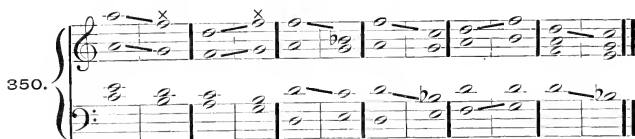
The movement of the three upper parts by skips in paralled motion at No. 1, is not good, since it deviates from all the rules of harmonic connection, and moreover is not necessary.

The progression of one or two voices by skips is only allowable when some other voice preserves the harmonic connection by remaining stationary or by moving in the contrary direction.

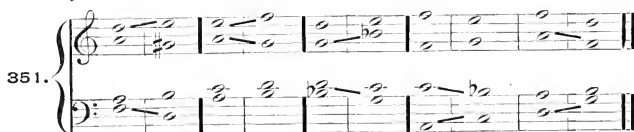
No. 2 has the same fault, and is made still harsher by the free entrance of both fundamental and seventh, coming thereby in an awkward position where one crowds the other.

It has already been said, that either the dominant seventh or the fundamental ought to be prepared.

Thus, all of the following examples are defective :

350. 

If the free entrance of the fundamental and seventh takes place in contrary motion, the effect, as already stated, is less unpleasant, *e. g.*

351. 

Example No. 349 also contains another fault at No. 2, namely, a *skip* in the bass *from* the chord of the sixth and fourth, which is contrary to rule.

The third fault in Ex. 349 lies in the covered fifth which appears between tenor and alto, and which is made more apparent by the skip in the soprano.

The covered fifth at No. 4 is objectionable, because unnecessary; that at No. 5 is better on account of both alto and bass moving in contrary motion with tenor and soprano.

The following will be a more correct working of Exercise 348:

352 a.

6 6/4 2 6 6 8 7

Exercises.

352 b. 1.

G C - G - D a D G D7 G

2.

G D G D e C D a D7 G

3.

G C D C D7 G e a7 D7 G

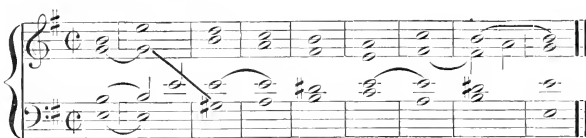
4.

G - D - e7 a D C G D7 G

The next exercise,

353. 

with the following treatment:

354. 

contains an incorrect progression known by the name of **unharmonic cross-relation**, or **false relation**.

The *unharmonic cross-relation*, which belongs to the unmelodious progressions, occurs when any tone is immediately followed by the same tone *chromatically altered* in another voice, as in the second and third measures of the above example, where the G in the alto is immediately followed by the G \sharp in the bass.

In order to avoid this fault, the following rule must be observed:

• When any tone is to be immediately followed by the same tone chromatically raised or lowered, such chromatic alteration must take place in *one and the same voice*.

Although this rule is perfectly consistent with all the theoretical principles of harmony, there is perhaps none which admits of so many exceptions. In consequence, in manuals of later methods, the doctrine of the cross-relation has been regarded with suspicion, and instances cited in which the unharmonic cross-relations occur in a perfectly natural way, without ascertaining the reason why they do not sound faulty.

Here are a few that do not have a bad effect:

355. 

Two systems of musical notation in C major, 2/4 time. The first system contains examples c, d, and e. Example c shows a progression from a C major triad to a C minor triad, with a cross-relation between the two. Examples d and e show similar progressions with different voicings. The second system contains examples f, g, and h. Example f shows a progression from a C major triad to a C minor triad, with a cross-relation. Examples g and h show similar progressions with different voicings. Arrows indicate the cross-relations between notes in different chords.

In all these cases, the cross-relation is not formed by essential notes of a simple harmonic progression, but is the result of a *contraction*, or abridgment, of certain natural progressions which, had they been employed in their complete form, would not have agreed with the metrical character of the phrase. Thus, in the character of changing notes, as at *a*, *b*, *g*; or through contraction, as at *c*, *d*, *e*, *f*, *h*.

The original progressions, by the contraction of which the above cross-relations were formed, are as follows:

Example 356. Musical notation in C major, 2/4 time, showing the original progressions for examples c, d, e, and h. The notation is similar to the previous block, but the cross-relations are avoided by using longer note values or different voicings. Arrows indicate the original progressions.

Compare these examples with those under No. 355, at *c*, *d*, *e*, *h*.

These conditions, under which the cross-relation is allowable, are, however, absent in the following and similar examples, which are therefore incorrect:

Example 357. Musical notation in C major, 2/4 time, showing an incorrect cross-relation. The notation is similar to the previous blocks, but the cross-relation is formed by essential notes of a simple harmonic progression, which is incorrect. An arrow indicates the cross-relation. The word "Or:" is written above the notation.

Freedom in the use of all cross-relations cannot, therefore, be justified. There is also to be taken into consideration the tempo, the consistency of a whole resulting from rhythmical divisions, which will make these formations not unpleasant, but rather, precise.

With the cross-relations is also classed a progression known as the **tritone**, an explanation of which follows:

The tritone is contained in the diatonic major scale between the fourth and seventh degrees, and is the progression of an augmented fourth, in the key of C, from F to B. This interval embraces *three whole degrees*, and derives its name from that fact.



Like all augmented intervals, the tritone should be avoided on account of the difficulty it presents to the singer. This difficulty is doubtless caused by the fact, that each of the two tones composing it require different progressions:



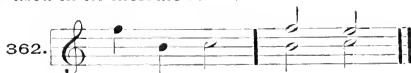
of which one must be omitted if the interval be given to *one* voice:



unless the melody be formed thus:



That this is, however, not the only reason of the unpleasant effect of the augmented fourth, is proved by its inversion, the diminished fifth, which would also require a two-fold resolution, but which is constantly used in its melodic form,



and is just as pleasing and easy of execution as the tritone is difficult and disagreeable.

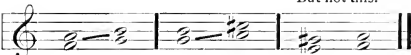
REMARK.—It may be further remarked in this connection, that the tritone is founded upon the diminished triad and its progression, as becomes clear from Ex. 362 above. (See page 39.)

The reason why the tritone has always been specially prohibited is that it was the *only* augmented interval which occurred in the simple harmonic progressions formerly in use. At the present time, however, it is merely classed with the other augmented progressions, which in *pure* part-writing should be avoided as unmelodious, or at least to be used with the greatest caution.

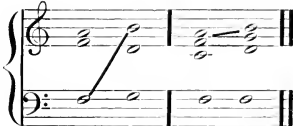
There are two things to be considered in the use of the tritone. If its progression is caused by an alteration of the position of *one and the same chord*, as at *a* in the following example, its appearance is not so unexpected, and its effect much less unpleasant than when the notes of which it is composed belong to *two different chords*, as at *b*, where the forced progression is perceptibly felt :

363. 

Formerly the prohibition of the tritone was extended to the progression of two consecutive *major thirds*, separated by the interval of a *whole* step, *e. g.*

364. 

and it cannot be denied that in two parts this progression has the same unpleasant effect as the tritone itself. In three or four parts, however, it is considerably less harsh, especially when it is not heard in the outer voices.

365. 

We now return to Ex. No. 353, in order to correct the cross-relation it contains :

366 a.

Exercises.

366 b.

1.

a E a F d a b⁷ E a

2.

a d — b⁷ a b⁰ E a

3.

e d^{#0} e a b⁷ e a e b⁷ e

4.

g e — D⁷ g a⁷ g D⁷ g

2. *Harmonic accompaniment to a given middle voice.*

This exercise, which properly belongs to the study of counterpoint, is very useful, and cannot be begun too soon. As in the preceding examples, the fundamentals are indicated by means of letters.

Exercise.

367.

ALTO C G C F G a d⁷ G C

In working out this exercise, the progression of the bass will, as

usual, be the most important, and should be considered first; at the same time, however, the soprano may be added, *c. g.*

368.

The foregoing is complete as a three-voiced movement; with the addition of the tenor it will appear thus:

369 a.

Exercises with given Alto.

369 b.

1. *F g C7 d g7 C F*

2. *F Bb C*

3. *Bb C F g C F F C F C d*

4. *g C F d — g C A7 d c7 A7 d*

5. *d Bb C c7 d c7 A d*

6. *g D — g Bb c g D7 g*

A given tenor will be similarly treated:

Exercise.

TENOR. C G a F C G⁷ C

370.

Sketch of the bass and soprano:

371.

For four voices:

372 a.

Exercises with given Tenor.

372 b. 1. 2.

3. 4.

These exercises should be continued until the sketching of the bass, as well as the leading of all the other voices, is perfectly pure and free.

In closing this chapter, it may be observed that in order to form a good four-voiced movement, a good position of the parts is indispensable. The compass of the voices must not be exceeded, the distance between the voices must not be too great, neither must it be too small.

The following rule should be observed:


The distance between any two of the three upper voices *must never exceed an octave*. Between the bass and tenor there are exceptions.

CHAPTER XVIII.

EXTENSION OF THE HARMONIC ACCOMPANIMENT.

To a given voice in whole notes, with the harmonic accompaniment in half notes alternately in the other voices. This can be done through *two* chords, through *change of position in one chord*, or through *suspensions*. The exercises will be marked the same as before.

Exercises.

373. 

The bass may be sketched in this manner:

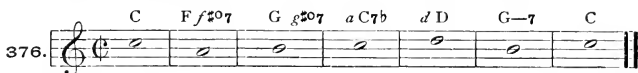
374. 

Secondary chords of the seventh appear *without* preparation in the second and fourth measures. These are called *passing sevenths*. They start from the fundamental of the chord and always occur upon the *arsis*. In this way they are admissible in all the voices.

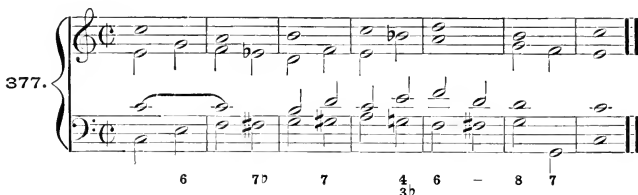
By adding the middle voices to the above sketch, we get the following four-voiced movement.

375. 

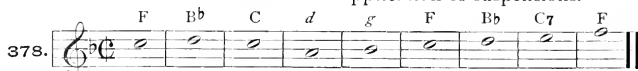
The same exercises with richer harmony may be like this:

376. 

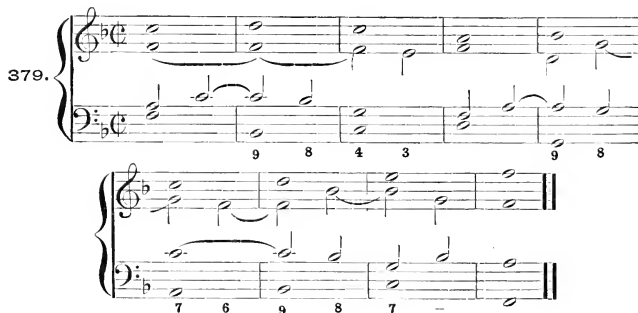
Worked out:

377. 

The next exercise will exhibit the application of suspensions.

378. 

Worked out:

379. 

We pass over the exercises in the middle voices.

The object in using the simply melodic progression in whole notes for exercises (*cantus firmus*) was to show the simple harmonic contents of a measure, or, if in Alla-breve time, its principal divisions—half notes.

If the exercise is to be in half-notes, chorals may be used for the purpose. For individual practice, the fundamentals of well harmonized chorals may be taken of, as shown below, and the working out attempted as follows:

380.

$a - A7 d a d7 b^{07} \hat{E} E a - E -7 \hat{a}$
 $C G C F b^0 C F \hat{C} C a C7b d - \hat{a} a f^{20}$
 $G -7 C G a7 D \hat{G} C G C d7 G E a \hat{E}$

As above indicated, this choral could be worked out thus :

381.

After sufficient practice has been had to insure certainty in the treatment of simple harmony, we can proceed to the further development of the voices through passing and changing notes. For this purpose, melody and melodic progression will be further treated in the next chapter.

CHAPTER XIX.

ON THE FORMATION OF MELODY.

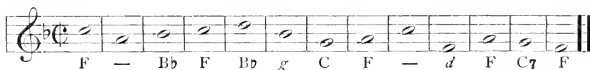
The *invention* of melody will not be discussed here, but its development, and, what is of great importance for our harmonic exercises, to learn and to know how to use that which is essentially harmonic in the formation and treatment of melodies. Everything will depend upon the recognition and comprehension of the following principles:

Every melody, however fully developed it may be, has a foundation just as simple as the examples we have used in our previous studies.

Therefore, every harmonic leading of the voices, no matter how complicated, can be reduced back to a simple connection of harmony.

To fully appreciate this, it will be necessary to learn how to discriminate between the essential and that which is used as auxiliary or ornamental.

We select for this purpose the analytic method, and will attempt to develop the following melody, given in its simplest form, according to the method used before, with indication of the fundamental tones.

332. 

Both melody and harmony are simple, and the latter may be written out for four voices, thus:

383. 



Before proceeding to further develop this movement, it will be necessary to premise what is to be mentioned concerning the rhythmic formation of a melody.

A melody may be either a musical movement containing more or less measures, without any fixed limit, as often occurs with themes or motives of a composition, or it can be a distinct whole, separated and bounded by antitheses.

In the latter case it is called a **period**, and contains usually eight measures, which, divided into two sections of four measures each, form antitheses. These sections are often called "thesis and antitheses"—sometimes "antecedent and consequent."

That the above movement forms a period is evident from the close at the end. It will next be in order to ascertain the divisions into sections. These points of division are very often marked by the cadences which occur in the middle of the passage, either as imperfect whole, half, or plagal cadences. Such a *half-cadence*, usually a close on the dominant, occurs in our exercise at the sixth and seventh measures, and the point of division between the two sections of the period will be at the place where the sign † stands.

The first section, the thesis, will therefore contain *seven*, the antithesis *six* measures, and each must be rhythmically changed to four measures. This may be effected in the following manner:



By adding the harmonic accompaniment selected above, a complete musical period is obtained.

Transformations into different kinds of time, as for example, into $\frac{3}{4}$, $\frac{3}{8}$, or $\frac{6}{8}$ time, are very easily managed, *e. g.*

385.  etc.

This example shows a single melodic line in G major. It starts in 3/4 time, then changes to 2/4, then to 3/8, and finally to 6/8. The rhythm of the notes is adapted to each time signature, demonstrating how a melody can be re-timed without changing its essential character.

We come next to the tonic variations of the melody, and add to it passing and changing notes, *e. g.*

386. 

This example shows a melodic line in G major. The first staff shows the original melody with some passing notes. The second staff shows a variation where the melody is transposed to a different tonic (D major), illustrating how the same melodic shape can be adapted to different keys.

A still freer use of all auxiliary tones could give the following form :

387. 

This example shows a more complex melodic line in G major. The first staff is labeled 'Adagio.' and the second staff is labeled 'Originally.' The 'Adagio' version uses many auxiliary tones (chromatic passing notes) to connect the main notes of the melody. The 'Originally' version is a simpler, more direct version of the same melody. The example demonstrates how auxiliary tones can be used to create a more expressive and varied melodic line.

The simple melodic progression underneath is easily recognized as the original foundation. It will be evident, if we add the other voices, with the few deviations made necessary by the upper voice, that the above melody is carried out with reference to the original harmony :

388. *Adagio.*

As to the parallel octaves in the middle voices in the third measure of this example, they may be regarded as faultless when they do not occur singly, but in longer passages as a doubling of another voice for the purpose of giving it greater prominence. In this case the movement would be regarded as three-voiced.

Notwithstanding the small independent worth of this example, it has served to show how the simplest melodic and harmonic movement can be developed.

The advantage to be derived from studying and recognizing these melodic and harmonic relations is too great for us to refrain from giving another example in the following interesting movement. The fundamental harmonic progression is just as simple as in the previous example.

389.

This passage forms a period. The middle close is found in the half-cadence in the seventh measure.

We omit the different kinds of measure, and select the following section :

390.

The upper voice may be developed in the following manner, at the same time adhering to the harmonic progression.

391.

The following passage from Beethoven's E \flat major quartet will show how the other voices can take part in melodic development:

392.

Adagio.

VIOLINO I.

VIOLINO II.

VIOLA.

VIOLONCELLO.

A comparison with No. 390 will show the melodic and harmonic variations.

Here follows still another variation of the original melody from the same composition :



The other voices appear with the following variations.

394.

etc.

These hints regarding the development of melody will be sufficient here, while further practice may be left to the personal efforts of the student.

REMARK.—The mechanical character of this whole treatment should not mislead us; for certainly in composition one does not always proceed in the way shown above. Our only object here was, partly, to place in the right light the relation of our previous exercises to the practical side, and partly, to gain a clear insight into complicated compositions themselves.

Concerning the accompanying voices, they arose naturally from the simpler harmonizing and required little change, showing themselves, even if subordinate, yet not unimportant on that account. Other kinds of accompaniment will be spoken of in the next chapter.

chords, all the rules for the leading of the voices must be observed *at the change of chords*, as well as in doubling.

We must not write :

Or.



but somewhat in this manner :

Or.



When the harmony changes, the *last note* of one figure and the *first* of the next must not form a false progression with any other voice, *e. g.*

Not.

Better.

Not.

Not better.



Harmonic figuration enables us to form *one-voiced movements* more perfectly. The examples may begin thus :

One voiced.



It is evident that these movements are suitable for an instrument like a violin or clarionet.

Two voiced.

400.

This musical exercise is in B-flat major and 2/4 time. It consists of two measures. The first measure has a treble clef with a whole note G4 and a bass clef with a whole note G2. The second measure has a treble clef with a whole note A4 and a bass clef with a whole note A2. The key signature has one flat (B-flat).

Three voiced.
In the middle voice.

This musical exercise is in B-flat major and 3/4 time. It consists of two measures. The first measure has a treble clef with a whole note G4 and a bass clef with a whole note G2. The second measure has a treble clef with a whole note A4 and a bass clef with a whole note A2. The key signature has one flat (B-flat).

In the lower voice.

In the upper voice.

This musical exercise is in B-flat major and 3/4 time. It consists of two measures. The first measure has a treble clef with a whole note G4 and a bass clef with a whole note G2. The second measure has a treble clef with a whole note A4 and a bass clef with a whole note A2. The key signature has one flat (B-flat).

In two voices.

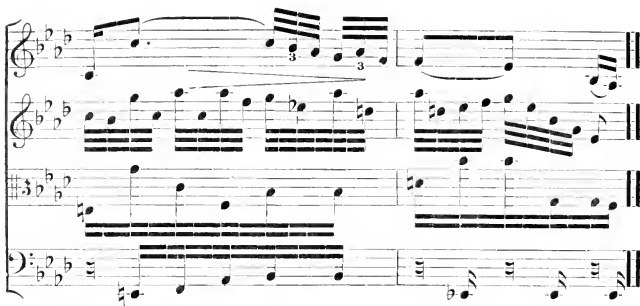
This musical exercise is in B-flat major and 2/4 time. It consists of two measures. The first measure has a treble clef with a whole note G4 and a bass clef with a whole note G2. The second measure has a treble clef with a whole note A4 and a bass clef with a whole note A2. The key signature has one flat (B-flat).

Figuration in the four-voiced phrase, will be an easy task after these attempts with the above example.

We prefer, instead, to quote an example of varied figuring from the quartet by Beethoven, mentioned above.

401.

The musical score is presented in three systems, each containing four staves. The key signature is three flats (B-flat, E-flat, A-flat). The first system includes a *pizz.* marking. The second system includes a *cres.* marking. The third system includes *cres.* markings on the first and third staves. The notation includes various rhythmic values, accidentals, and dynamic markings.



The whole of this rich development rests on the harmonic basis given in Nos. 390, 391 and 392; and in every case where the harmony changes the leading of the voices is carefully observed.

If a clear insight into such elaborate compositions, and a comprehension of their inner harmonic structure is desired, it will be very useful to reduce works of this kind back to their simple harmonic basis.

CHAPTER XXI.

THE EXERCISES IN THREE-VOICED MOVEMENT.

With few exceptions, our exercises thus far have been written in the four-voiced form, and although it affords greater completeness, and seems best adapted for harmonic connections, the three-voiced movements are also of great value, being particularly adapted for greater skill and freedom in the leading of the voices.

We begin as before, with exercises with figured basses.



The three-part phrase is sufficient for the triad, but through the leading of the voices one of its intervals may sometimes be wanting. In the case of the seventh chords, one interval, of course, will always be lacking, but this must never be the seventh itself. As a rule, the fifth can be omitted, as was the case with four parts, and also in many cases the fundamental also, but the third, the interval which determines the nature of the chord, can seldom be omitted without causing an especial vagueness. The exercise will be as follows, to which we append a few remarks:

403.

In the fourth measure, at N. B., the chord of the sixth and fourth of the diminished triad, E—G—B \flat , appears. It takes the place of the chord of the second, B \flat —C—E—G, the fundamental of which is here omitted. For four voices the chord would appear thus:

404.

See pages 170, and 171, concerning this chord.

In the fifth measure, a fourth represents the chord.

While a fourth can neither in three-part nor in two-part writing supply the place of a full chord, as is the case with the third or sixth, yet, in those cases where the chord of the sixth and fourth can be used in four-part harmony as a *passing chord* on the arsis, in three parts, in order to secure a better leading of the voices, the sixth (third of fundamental chord) can be omitted, leaving the fourth alone to represent the fundamental and fifth of the original chord.

In two-part movements, the fourth will sometimes stand instead of the chord of the second, especially in the case of a passing seventh, *e. g.*



With four parts, the above place in Ex. 403 would stand thus:



In Ex. 403, eighth measure, the chord of the sixth and fourth is formed complete through the skip in the alto.

In the tenth measure appears a chord of the sixth and fifth, which is really a suspension of the fourth, which by the movement of the bass resolves into a third. This appears plainer in four parts:



The last measure of No. 403 shows, through the octave F, that the triad can appear in such cases even without the third and fifth.

That the leading of the voices will often cause the omission of the third is shown in the first and second measure of the next example.

408.

The omission of the third occurs best upon the arsis, as here on the third beat of the measure, but it must never be lacking on the accent, or thesis.

Further exercises may be left to the teacher.

Exercises in the Three-voiced Movement to a Given Upper Voice.

The following exercise, with the fundamentals indicated, is to be worked out for three voices :

409.

410. Treatment.

without
fundamental.

The above needs no explanation.

The choice of the middle and lower voices will generally depend upon the position of the chords. Thus, in a low position the tenor would be more suitable than the alto; so, also, can the tenor be taken as the lower voice instead of the bass.

The tenor is selected as the middle voice in the following example, as its movement clings more to the bass, while the simple song of the soprano seems more isolated.

C a d G E a G C d g[#]o⁷ a e d D G⁷ C

411.

412.

Treatment.

N.B.

In the fifth measure, at N. B., a real ninth suspension appears, through the position of the voices, as a second, and which can occur but seldom, and only between tenor and bass. It may here be remarked that there cannot be a second-suspension, because the second results from the inversion of the seventh and must conform to the resolution of the latter, *e. g.*

413.

Exercise in a middle voice.

TENOR. d A B^b C g e^o d - e[#]o⁷ d A d

414.

For an upper voice, the alto is here the most convenient.

415.

The same exercise with the following selection of chords :

416. *d g A-7 B \flat G C F B \sharp C \flat d B \sharp F g C \flat d A d*

417.

Treatment.

The last measure but one shows that even the sixth can form a suspension.

For further practice, the exercises which were formerly given for the four-voiced movement can be used.

CHAPTER XXII.

ON THE TWO-VOICED MOVEMENT.

The poverty of the two-part phrase from a purely harmonic standpoint, makes it seldom available except in contrapuntal labors, where alone it derives importance from being applied in polyphonic movements, for example, in fugues. If, indeed, for simply harmonic use, a metrical and rhythmical variety in the formation of the voices will make the two-voiced movement tolerable, still, the contrapuntal development of the two voices can alone free them from the monotony of extended progressions of thirds and sixths, and give that completeness which every polyphonic movement must possess.

Necessarily, the omission of one or more intervals will always take place in this movement. With the triads, it will usually be the fifth or the fundamental. When chords of the seventh are used, of course the seventh must not be omitted. Octaves and fifths should rarely be introduced, as they sound too empty. The fourth can only be used in a few cases where the chord of the sixth and fourth would be admissible, or when it takes the place of the chord of the second. (See page 203.)

Example. C F \flat^o C $\bar{\cdot}$ F C \flat G C

418.

Treatment.

419.

The intervals which have been omitted can be ascertained by comparing the fundamental tones in Ex. 418. Lack of clearness in the harmony will be rare, since each chord explains itself by its con-

nection with the one which precedes and follows it. The same exercise with varied harmony :

C F-7 G C G *d* C C *a* G C

420.

Treatment.

421.

Most of the exercises in Part III invade, somewhat, the domain of counterpoint. The only difference is, that here, the harmonies are indicated, and we have only to carry out the leading of the voices accordingly, while in contrapuntal studies, a knowledge of harmony and facility in its use is assumed, so that the selection of the harmonies can be left to the choice of the student.

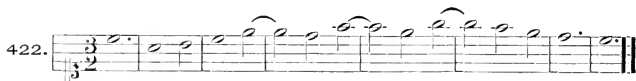
These studies may, therefore, be regarded as useful preparatory exercises to those, and will at the same time afford an insight into the relationship between harmony and counterpoint.

CHAPTER XXIII.

HARMONIC TREATMENT OF A GIVEN VOICE IN MELODIC FORM.

By melodic development of a voice is not to be understood here that richer ornamentation shown in Chapter XIX., but through metrical variety to avoid the simple choral-like progression of our earlier exercises, and thereby afford opportunity for learning to develop the

voices better in the harmonic accompaniment also. The next exercise will make this clearer :



The choice of chords will be made at the time of treatment. Although the kind of measure chosen will of itself produce a similar melodic leading of the voices to be filled out, still, particular attention must be given to their leading according to the principles developed in the previous chapters, if a free, skillful treatment of them is to be had. The exercise will first be treated in three-part harmony.

423.

This treatment needs no further explanation after the remarks on the three-voiced movement.

The harmonic treatment of this melody as a middle voice shows its adaptability, and may be recommended as a useful exercise.

To retain the alto voice and obtain a better position for it we transpose the melody to F major.

424.

The explanation of the unprepared chord of the sixth and fourth

in the fourth measure, is found in the remarks on passing chords in Chapter XV. It arose accidentally, on account of the progression of the bass by degrees, and stands here in the place of the chord of the second.

The treatment of the same *cantus firmus* transferred to the bass:

425.

Exercise 425 shows a cantus firmus in the bass staff, with its harmonization in the treble and alto staves. The key signature is one flat (B-flat), and the time signature is 3/2. The cantus firmus is written in the bass clef, and the harmonization is written in the treble and alto clefs. The notes are: C4, D4, E4, F4, G4, A4, B4, C5, D5, E5, F5, G5, A5, B5, C6, D6, E6, F6, G6, A6, B6, C7, D7, E7, F7, G7, A7, B7, C8, D8, E8, F8, G8, A8, B8, C9, D9, E9, F9, G9, A9, B9, C10, D10, E10, F10, G10, A10, B10, C11, D11, E11, F11, G11, A11, B11, C12, D12, E12, F12, G12, A12, B12, C13, D13, E13, F13, G13, A13, B13, C14, D14, E14, F14, G14, A14, B14, C15, D15, E15, F15, G15, A15, B15, C16, D16, E16, F16, G16, A16, B16, C17, D17, E17, F17, G17, A17, B17, C18, D18, E18, F18, G18, A18, B18, C19, D19, E19, F19, G19, A19, B19, C20, D20, E20, F20, G20, A20, B20, C21, D21, E21, F21, G21, A21, B21, C22, D22, E22, F22, G22, A22, B22, C23, D23, E23, F23, G23, A23, B23, C24, D24, E24, F24, G24, A24, B24, C25, D25, E25, F25, G25, A25, B25, C26, D26, E26, F26, G26, A26, B26, C27, D27, E27, F27, G27, A27, B27, C28, D28, E28, F28, G28, A28, B28, C29, D29, E29, F29, G29, A29, B29, C30, D30, E30, F30, G30, A30, B30, C31, D31, E31, F31, G31, A31, B31, C32, D32, E32, F32, G32, A32, B32, C33, D33, E33, F33, G33, A33, B33, C34, D34, E34, F34, G34, A34, B34, C35, D35, E35, F35, G35, A35, B35, C36, D36, E36, F36, G36, A36, B36, C37, D37, E37, F37, G37, A37, B37, C38, D38, E38, F38, G38, A38, B38, C39, D39, E39, F39, G39, A39, B39, C40, D40, E40, F40, G40, A40, B40, C41, D41, E41, F41, G41, A41, B41, C42, D42, E42, F42, G42, A42, B42, C43, D43, E43, F43, G43, A43, B43, C44, D44, E44, F44, G44, A44, B44, C45, D45, E45, F45, G45, A45, B45, C46, D46, E46, F46, G46, A46, B46, C47, D47, E47, F47, G47, A47, B47, C48, D48, E48, F48, G48, A48, B48, C49, D49, E49, F49, G49, A49, B49, C50, D50, E50, F50, G50, A50, B50, C51, D51, E51, F51, G51, A51, B51, C52, D52, E52, F52, G52, A52, B52, C53, D53, E53, F53, G53, A53, B53, C54, D54, E54, F54, G54, A54, B54, C55, D55, E55, F55, G55, A55, B55, C56, D56, E56, F56, G56, A56, B56, C57, D57, E57, F57, G57, A57, B57, C58, D58, E58, F58, G58, A58, B58, C59, D59, E59, F59, G59, A59, B59, C60, D60, E60, F60, G60, A60, B60, C61, D61, E61, F61, G61, A61, 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F234, G234, A234, B234, C235, D235, E235, F235, G235, A235, B235, C236, D236, E236, F236, G236, A236, B236, C237, D237, E237, F237, G237, A237, B237, C238, D238, E238, F238, G238, A238, B238, C239, D239, E239, F239, G239, A239, B239, C240, D240, E240, F240, G240, A240, B240, C241, D241, E241, F241, G241, A241, B241, C242, D242, E242, F242, G242, A242, B242, C243, D243, E243, F243, G243, A243, B243, C244, D244, E244, F244, G244, A244, B244, C245, D245, E245, F245, G245, A245, B245, C246, D246, E246, F246, G246, A246, B246, C247, D247, E247, F247, G247, A247, B247, C248, D248, E248, F248, G248, A248, B248, C249, D249, E249, F249, G249, A249, B249, C250, D250, E250, F250, G250, A250, B250, C251, D251, E251, F251, G251, A251, B251, C252, D252, E252, F252, G252, A252, B252, C253, D253, E253, F253, G253, A253, B253, C254, D254, E254, F254, G254, A254, B254, C255, D255, E255, F255, G255, A255, B255, C256, D256, E256, F256, G256, A256, B256, C257, D257, E257, F257, G257, A257, B257, C258, 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B281, C282, D282, E282, F282, G282, A282, B282, C283, D283, E283, F283, G283, A283, B283, C284, D284, E284, F284, G284, A284, B284, C285, D285, E285, F285, G285, A285, B285, C286, D286, E286, F286, G286, A286, B286, C287, D287, E287, F287, G287, A287, B287, C288, D288, E288, F288, G288, A288, B288, C289, D289, E289, F289, G289, A289, B289, C290, D290, E290, F290, G290, A290, B290, C291, D291, E291, F291, G291, A291, B291, C292, D292, E292, F292, G292, A292, B292, C293, D293, E293, F293, G293, A293, B293, C294, D294, E294, F294, G294, A294, B294, C295, D295, E295, F295, G295, A295, B295, C296, D296, E296, F296, G296, A296, B296, C297, D297, E297, F297, G297, A297, B297, C298, D298, E298, F298, G298, A298, B298, C299, D299, E299, F299, G299, A299, B299, C300, D300, E300, F300, G300, A300, B300, C301, D301, E301, F301, G301, A301, B301, C302, D302, E302, F302, G302, A302, B302, C303, D303, E303, F303, G303, A303, B303, C304, D304, E304, F304, G304, A304, B304, C305, D305, E305, F305, G305, A305, B305, C306, D306, E306, F306, G306, A306, B306, C307, D307, E307, F307, G307, A307, B307, C308, D308, E308, F308, G308, A308, B308, C309, D309, E309, F309, G309, A309, B309, C310, D310, E310, F310, G310, A310, B310, C311, D311, E311, F311, G311, A311, B311, C312, D312, E312, F312, G312, A312, B312, C313, D313, E313, F313, G313, A313, B313, C314, D314, E314, F314, G314, A314, B314, C315, D315, E315, F315, G315, A315, B315, C316, D316, E316, F316, G316, A316, B316, C317, D317, E317, F317, G317, A317, B317, C318, D318, E318, F318, G318, A318, B318, C319, D319, E319, F319, G319, A319, B319, C320, D320, E320, F320, G320, A320, B320, C321, D321, E321, F321, G321, A321, B321, C322, D322, E322, F322, G322, A322, B322, C323, D323, E323, F323, G323, A323, B323, C324, D324, E324, F324, G324, A324, B324, C325, D325, E325, F325, G325, A325, B325, C326, D326, E326, F326, G326, A326, B326, C327, D327, E327, F327, G327, A327, B327, C328, D328, E328, F328, G328, A328, B328, C329, D329, E329, F329, G329, A329, B329, C330, D330, E330, F330, G330, A330, B330, C331, D331, E331, F331, G331, A331, B331, C332, D332, E332, F332, G332, A332, B332, C333, D333, E333, F333, G333, A333, B333, C334, D334, E334, F334, G334, A334, B334, C335, D335, E335, F335, G335, A335, B335, C336, D336, E336, F336, G336, A336, B336, C337, D337, E337, F337, G337, A337, B337, C338, D338, E338, F338, G338, A338, B338, C339, D339, E339, F339, G339, A339, B339, C340, D340, E340, F340, G340, A340, B340, C341, D341, E341, F341, G341, A341, B341, C342, D342, E342, F342, G342, A342, B342, C343, D343, E343, F343, G343, A343, B343, C344, D344, E344, F344, G344, A344, B344, C345, D345, E345, F345, G345, A345, B345, C346, D346, E346, F346, G346, A346, B346, C347, D347, E347, F347, G347, A347, B347, C348, D348, E348, F348, G348, A348, B348, C349, D349, E349, F349, G349, A349, B349, C350, D350, E350, F350, G350, A350, B350, C351, D351, E351, F351, G351, A351, B351, C352, D352, E352, F352, G352, A352, B352, C353, D353, E353, F353, G353, A353, B353, C354, D354, E354, F354, G354, A354, B354, C355, D355, E355, F355, G355, A355, B355, C356, D356, E356, F356, G356, A356, B356, C357, D357, E357, F357, G357, A357, B357, C358, D358, E358, F358, G358, A358, B358, C359, D359, E359, F359, G359, A359, B359, C360, D360, E360, F360, G360, A360, B360, C361, D361, E361, F361, G361, A361, B361, C362, D362, E362, F362, G362, A362, B362, C363, D363, E363, F363, G363, A363, B363, C364, D364, E364, F364, G364, A364, B364, C365, D365, E365, F365, G365, A365, B365, C366, D366, E366, F366, G366, A366, B366, C367

In the fifth measure at N. B., the skip of the tenor into the seventh is not altogether faultless, because the soprano skips also in parallel motion to the fundamental, G. This can only be excused by the position of the alto, which holds the connecting tone.

In the same measure, appears the chord of the sixth and fourth of the augmented triad, the original fifth of which is prepared. It has here the character of a suspension from below. (See Suspensions, Chapter XII., page 131.)

The same *cantus firmus* in the alto, transposed to D major :

430. N.B.

c. f.

Figured Bass: 5 4 3 6 9 8 7 / 4 3 5 6 4 7

N.B.

Figured Bass: 7 6 5 3 6 7

In the fourth measure suspensions are found in three voices. In the fifth and sixth measures the position of the alto and tenor is not good, because they are more than an octave apart.

Of the remaining treatments, that with the *cantus firmus* in the bass here follows :

431.

N.B.

The introduction of the chord of the seventh of the seventh degree in the fourth measure, lacks clearness, because the fundamental lies immediately above the seventh. (See page 76.) Besides this, its progression does not follow here according to the movement of the leading tone, but in the same cadencing form as with other seventh chords: $c\sharp^o_7 - F\sharp$. (See pages 75, 76.) The treatments of this *cantus firmus* with more movement in the voices, can be carried out thus :

432.

N. B.

6 5 2 6 5 7 6 4 4 3 6 7

The upward progression of the seventh in the next to the last measure (at N. B.) is caused by the movement of the soprano. (See page 93.)

The treatment of the *cantus firmus* in the tenor follows:

433.

c. f.

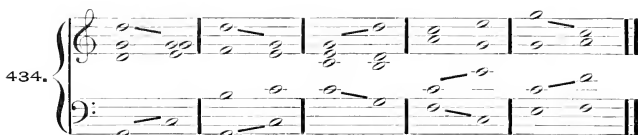
6 6 6 6

6 4 3 6 6 4 7

The third measure gives opportunity to speak of consecutive octaves and fifths in *contrary motion*.

According to the principle laid down heretofore, they are quite as faulty as those in parallel motion, and it is especially the case with the octave progressions that they hamper the free movement of the voices. With the fifth progressions, however, the ill effect is much mitigated by contrary motion, especially those which move *towards* each other, while those which move *from* each other make the separation or want of connection more perceptible. (See also Ex. 430 in the sixth and seventh measures, between tenor and bass.)

Compare the following examples :



An examination of the treatment contained in this chapter will show plainly the melodic development of the voices, and this is the reason for regarding them as contrapuntal labors; for the essence of counterpoint, as distinguished from the rhythmical harmonic form, requires the freer melodic leading of the voices, but with observance of the harmonic laws which form, so to speak, its innermost principle.

In all these examples, even where the voices move in quarter notes, the harmonic ground-work can be found, and thus they may serve, for the present, to show us the difference between the simply harmonic and contrapuntal treatment of a given voice. The more detailed study of this subject belongs properly to counterpoint itself.

• CHAPTER XXIV.

THE FIVE-VOICED MOVEMENT.

Since the doubling of the intervals of a triad is necessary even in a four-voiced movement, so also will it be necessary in a greater degree in movements for five or more voices, and even with the chords of the seventh.

In the pure harmonic movement, each voice must preserve its independence. To accomplish this, the intervals best adapted for doubling will be those that admit of a *double progression*. This can take place, to a certain extent, with each interval of a chord, but the sevenths are the least adapted for doubling, except, perhaps, where a melodic progression makes it necessary, as for example, in passing.


Further remarks follow under the examples given.

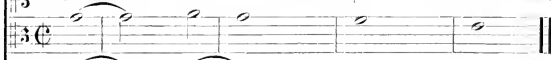
Exercise.


435. 

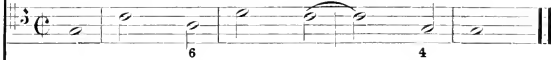
In treating this, we may select, according to the position of the voices, either two sopranos, two altos or two tenors.


436.

SOPRANO. 

ALTO I. 


ALTO II. 


TENOR. 


BASS. 

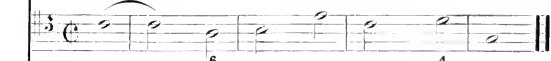
The same exercise differently arranged:


437.

SOPRANO I. 

SOPRANO II. 

ALTO. 

TENOR. 

BASS. 

That the independence of the voices may be maintained, two voices should not remain stationary upon one tone, or in the octave, *if the chords change*. In the above example, in the first and second measures, the second soprano and tenor hold the tone C over the bar, but as the harmony does not change, no fault appears, the chord only changing its position.

The following passage, however :

438.

may be corrected thus :

439.

REMARK.—This rule, however, admits of frequent exceptions where there are many parts, because other relations then present themselves.

That the leading of the voices will allow the leading tone to be doubled, is shown in the third measure of Ex. 437, between the second soprano and tenor.

As in the four-voiced movement, so also in movements for five or more voices, the impossibility of avoiding covered fifths, octaves and unisons will exist in a greater degree.

It may be mentioned again, that here also the *outer voices* must progress in pure relations, and greater freedom be allowed to the middle voices only.

The following example contains various progressions of this kind :

440.

SOPRANO.

ALTO I.

ALTO II.

TENOR.

BASS.

6 9 8 6 4 8 7 7 6 4

6 7 2 6 5 7 7 6 5 7

The progressions of covered fifths, octaves and unisons in this example are indicated by strokes. The open fifth in the eighth measure between the second alto and bass is not to be avoided, since the chord of the diminished seventh can only with difficulty progress otherwise when there are several parts. The first and second alto from the eighth measure could progress thus:

441.

That the voices, particularly the middle ones, must often cross each other, is seen in the second and third measures, between the second alto and tenor.

For practice in the five-voiced movement, chorals can be used to advantage. The following may be given here :

442.

G — C D C D⁷ G D⁷ G *e* G *a*

— — G D⁷ G *e* *a* E⁷ *a* *b*^o *b*^o7 E *a* D⁷

G C D *a* *e* *a* B *e* G D *a* — G D⁷ G

Exercises in five or more voices require a simple and natural bass progression, and the less difficult and artificial it is, the clearer the succession of harmonies will become. This is here all the more important, because with the full chords and the necessity for the free movement of the voices, very unintelligible progressions can easily arise.

The beginning of this exercise here follows :

443.

6 6 6/5 7 6 6 etc.

In the repetition, the following change in the harmony can be made :

444.

G G7 C E7 a e a B e E7 a etc.

2 6 6 4/3 7 6 5 4/2 6

CHAPTER XXV.

THE SIX, SEVEN, AND EIGHT-VOICED MOVEMENT.

The necessity of doubling or trebling increases with the number of voices added, and also their independent movement will often require them to cross each other. The simplest harmonic progressions become here the principal condition of the possibility of conducting so many voices, and it must be remembered that many chords are not at all suited to this kind of writing, because their intervals require a fixed progression and cannot be doubled, notably, the altered chords and the chord of the diminished seventh. A few progressions of the triad follow here.

Progression to the second degree :

445.

Four-voiced. Five-voiced.

Six-voiced. Seven-voiced. Eight-voiced.

Progression to the third degree :

Four-voiced. Five-voiced. Six-voiced. Seven-voiced. Eight-voiced.

Progression to the fourth degree :

Four-voiced. Five-voiced. Six-voiced. Seven-voiced. Eight-voiced.

Progression to the fifth degree :

Four-voiced. Five-voiced. Six-voiced. Seven-voiced. Eight-voiced.

We pass over further combinations. It will be very advantageous to try them with all the inversions.

As an example in the management of the voices in six parts, the choral under No. 442 is here given :

446.

SOPRANO
1 & II.

ALTO.

TENOR
1 & II.

BASS.

6 6 6 5 7

The first system consists of three staves. The top two staves are in treble clef with a key signature of one sharp (F#). The bottom staff is in bass clef with the same key signature. The music features various chords and melodic lines. Below the bass staff, the following figures are written: 6, 6, 6, 6 4, 7, 2, 6, and 6 4 3.

The second system consists of three staves in the same key signature and clefs as the first. The musical notation continues with different chordal and melodic structures. Below the bass staff, the following figures are written: 6, #, 4 2, 6, 6, 7 4, and 3.

The third system consists of three staves in the same key signature and clefs. The musical notation continues. Below the bass staff, the following figures are written: 6, 7 4 3, 6, 7 5, 7, and 6.

6 # 6 6 6/4 7/4 3

Since in polyphonic choral movements, all the voices are not employed at the same time, as in a plain choral treatment, the harmony often appears in only three or four parts, and is worked up in intensity by the addition of the others.

The following examples will explain this kind of chorus movement, and especially serve to show, that suspensions and passing notes can be employed in polyphonic work also, without disadvantage to its clearness and comprehensibility.

447.

SOPRANO
I & II.

ALTO.

TENOR
I & II.

BASS.

Four staves of musical notation in 3/4 time, key of D major. The notation includes various chords and melodic lines, ending with a double bar line and repeat sign.

448.

SOPRANO I.

Musical notation for Soprano I, starting with a rest followed by a half note D4, then a quarter note E4, and a half note F#4, all marked with a forte (*f*) dynamic.

SOPRANO II.

Musical notation for Soprano II, starting with a rest followed by a half note D4, then a quarter note E4, and a half note F#4, all marked with a forte (*f*) dynamic.

ALTO I.

Musical notation for Alto I, starting with a rest followed by a half note D4, then a quarter note E4, and a half note F#4, all marked with a forte (*f*) dynamic.

ALTO II.

Musical notation for Alto II, starting with a rest followed by a half note D4, then a quarter note E4, and a half note F#4, all marked with a forte (*f*) dynamic.

TENOR.

Musical notation for Tenor, starting with a rest followed by a half note D3, then a quarter note E3, and a half note F#3, all marked with a forte (*f*) dynamic.

BASS.

Musical notation for Bass, starting with a rest followed by a half note D2, then a quarter note E2, and a half note F#2, all marked with a forte (*f*) dynamic.



First system of musical notation, consisting of six staves. The top staff is in treble clef with a key signature of one sharp (F#). The bottom staff is in bass clef. The music features various note values, including quarter, eighth, and sixteenth notes, as well as rests and accidentals (sharps and flats). The system concludes with a double bar line.



Second system of musical notation, consisting of six staves. The top staff is in treble clef with a key signature of one sharp (F#). The bottom staff is in bass clef. The music continues with various note values, including quarter, eighth, and sixteenth notes, as well as rests and accidentals. The system concludes with a double bar line.

In eight-part chorus movements, where the customary four voices are usually doubled, the latter are not always employed as eight independent voices, which might easily cause too great fullness, but frequently two voices of a kind are employed in unison (for example, two sopranos, two altos, or two tenors and two bases in unison,) so that the harmony often appears in four, five and six parts. We find also the eight voices divided into two different choirs, each acting independently, and only in single passages together. As an example of the peculiar movement which many of these parts must make, the beginning of the above choral is given here in eight parts :

449.

The musical score is for eight parts, labeled as follows:

- SOPRANO I. & II.
- ALTO I. & II.
- TENOR I. & II.
- BASS I. & II.

The score is written in four systems, each with four staves. The first system is in G major (one sharp) and C major (no sharps or flats). The second system is in F major (one flat). The third system is in G major (one sharp). The fourth system is in F major (one flat). The notation shows various chords and melodic lines, with some parts (Soprano and Alto) featuring unison doubling in certain measures, indicated by the 'I. & II.' labeling and the way the staves are written.

In polyphonic movements which are divided into two different choirs, the difficulty of this manner of writing is met by making not altogether a *tonical*, but often a *metrical* difference between the voices, where two or more choirs work together. It is always to be presumed, however, that the successions of harmony shall take place in the simplest manner, and never by quick changes.

The above is generally to be understood when we speak of twelve or sixteen-part choruses, movements, etc., and only single pieces of Bach are found where eight or more voices, including, however, instrumental parts, are treated obligato.

These hints regarding the polyphonic movement may here suffice, as the rest, with a thorough knowledge of harmony, may be left to personal study. We may remark further, however, that the use of the polyphonic form will be applicable mostly in compositions for choirs. In orchestral works it will not find place, as the taking part by so many instruments of various kinds would lead us to suppose.

CHAPTER XXVI.

ON THE MUSICAL FORMS OF CLOSE.

Several kinds of close have already been mentioned on page 33, and further remarks followed in relation to the authentic close on pages 41 and 56, but throughout the whole treatise there has been no further opportunity to revert to the subject; therefore, a fuller explanation of these and other forms of close may follow here:

The forms of close are divided, first, into the **authentic close** and the **plagal**, or **plagalic close**.

The authentic close has the formula V—I, the plagal close IV—I (or in minor, V—I, IV—I), as has been shown before. Both forms are used not only at the end of entire compositions, but also at the close of the principal divisions of the periods and their sections. The more particular discussion of this subject belongs to the doctrine of form.

If the plagal close concludes a piece, it seldom stands alone, but

follows the authentic close; in minor it frequently leads to major, *e. g.*

450.

Authentic close. Plagal close.

In this case, as above, it is introduced by means of a modulation. The closes (cadences) are also divided into **whole** and **half** closes, or cadences. By the whole cadence is understood the same which is comprehended under the *authentic cadences*.

With the *whole cadences* a distinction is again made between **perfect** and **imperfect** ones.

The **perfect whole cadences** are those in which the bass takes the fundamentals of the dominant and tonic, and the soprano the fundamental of the tonic, *e. g.*

451.

Not.

If this is not the case, they are called **imperfect**, *e. g.*

452.

etc.

If the bass progresses from the dominant to another degree, they are called **deceptive cadences**.

453.

etc.

See the examples, pages 91 to 94.

The **half cadences** have the formula I—V, *e. g.*

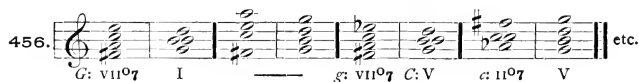


They also consist in this, that the dominant triad completes the phrase.

Beside the tonic, chords of other degrees may precede the dominant triad in the formation of a half close, *e. g.*



Among the *half-cadences* are also included those closes in the *key of the dominant* which are formed by a modulation into the same, not a decisive one through the fundamental position of the dominant harmony of the seventh, but either through its inversions or through the chord of the seventh of the seventh degree, *e. g.*



This is the case, however, only in relation to the key which has just before been made use of.

For the further understanding of these kinds of cadences, compare those which are found in the examples of this book. In No. 388, in the third and fourth measures, a *half* cadence is found which is formed through II—V, which effects the close of the first section of the whole period; in the seventh and eighth measures, however, we find a *perfect whole* or authentic cadence.

In Ex. 392, in the third and fourth measures, is a *half* cadence formed through I—V, and a *perfect whole*, or *authentic* cadence in the key of the dominant at the end. (Here, however, there is *no half cadence*, because the dominant seventh harmony makes the modulation complete.)

In the choral under No. 446, the first strophe ends with an *imperfect whole* cadence, the second with a *perfect whole* cadence, the third with a *half* cadence to *e* minor (iv—V), the fourth with a *perfect whole* cadence in G major, the fifth with a *perfect whole* cadence in *a* minor, the sixth with a *half* cadence in *e* minor (iv—V), and the seventh with a *perfect whole* cadence in G major. The application of the different cadences is easily found in chorals; for larger compositions they supply the means of boundary and connection of the smaller as well as the larger movements, and should therefore be used with much care, because upon them, to a great extent, depends the construction of a piece with regard to form.

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